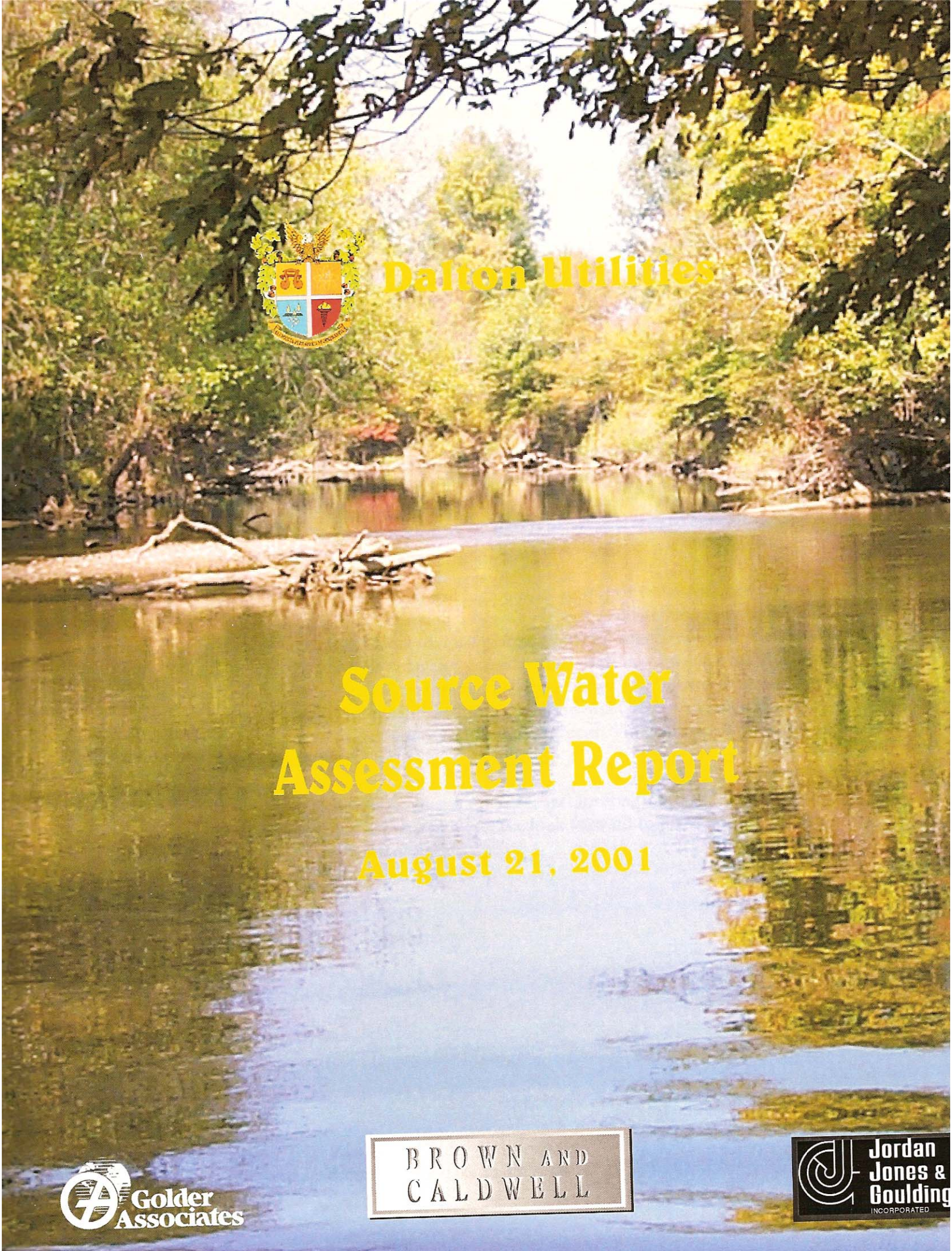

Dalton Utilities

Source Water Assessment Report

August 21, 2001

Golder Associates

BROWN AND CALDWELL

Jordan Jones & Goulding INCORPORATED

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SOURCE WATER ASSESSMENT PLAN FOR DALTON UTILITIES

This source water assessment is prepared for Dalton Utilities, in accordance with Georgia's Source Water Assessment and Protection Implementation Plan for Public Drinking Water Sources, effective May 1, 2000. The assessments of Dalton Utilities' four intakes are combined in this report. The overall source water susceptibility scores for the Dalton water supplies are as follows:

Watershed	Source Water Susceptibility
Coahulla Creek	Low
Conasauga River	Low
Freeman Springs	Low
Mill Creek	Medium

The assessment concluded that susceptibility for drinking water supplies can be grouped into three categories:

- small on-site wastewater treatment facilities that have had permit violations,
- roads/railway lines, industrial facilities with large volumes of chemical storage, lift stations, or agricultural waste lagoons that have a potential for spills, and
- non-point source pollution from urban areas, septic tanks, and agriculture run-off.

This report is broken down into three sections: background information, source water assessment methodology, results for each supply watershed, and summary and recommendations. Appendices provide greater detail for the susceptibility rankings, relevant regulations, and water quality summarizes.

BACKGROUND INFORMATION

This section presents background information on water withdrawal permits, the water supply watersheds, public involvement activities, and relevant regulatory requirements related to source water assessments.

Water Withdrawal Permits

Dalton Utilities treats more than 40 million gallons per day of raw water, serving 27,000 residents and businesses in Whitfield, Murray, and Catoosa counties. Dalton Utilities has one operational permit that covers three treatment plants but separate withdrawal permits for each of the three surface water and one groundwater withdrawal points. Table 1-1 presents permit information. Water from each intake and plant is mixed within the service area; therefore, one report will be presented to EPD. Dalton Utilities can accept treated water from the Catoosa Utility District for emergency use and the East Side Utility District for regular use.

Table 1.1 Dalton Utilities Permit Information

Name	Permit Limits	Comments
Operational Permit (production)	42.0 MGD 12.0 MGD 2.0 MGD	V.D. Parrott Water Filtration Plant Mill Creek Water Filtration Plant Freeman Springs Water Filtration Plant
Conasauga River (withdrawal)	49.4 MGD Daily Max. 40.3 MGD Month Ave. if Conasauga >88 cfs 40.0 MGD Daily Max. 33.0 MGD Month Ave. if Conasauga <88 cfs	V.D. Parrott Plant
Coahulla Creek (withdrawal)	6.0 MGD Daily Max.* 5.0 MGD Month Ave.*	V.D. Parrott Plant *Coahulla plus Conasauga withdrawals cannot exceed Conasauga withdrawal limits.
Mill Creek (withdrawal)	13.2 MGD Daily Max. 7.5 MGD Month Ave.	Mill Creek Plant
Freeman Springs (withdrawal)	2.0 MGD Daily Max. 1.5 MGD Month Ave.	Freeman Springs Plant Groundwater under the Influence of Surface Water

Water Supply Watershed Description

The water supply watersheds for Dalton Utilities are located north and west of the City of Dalton. Dalton is approximately 89 miles north of Atlanta, GA and 32 miles south of Chattanooga, TN. Please see figure 1.1. The water supply watersheds have been delineated and are described as follows:

- The Coahulla Creek watershed extends north of Dalton to Cleveland, TN and is 119 square miles above the intake. Coahulla Creek is a tributary to the Conasauga River. The watershed is considered a large drinking water supply watershed by Department of Community Affairs (DCA).
- The Conasauga River watershed area above the intake is 307 square miles and contains portions of Whitfield, Murray, Fannin and Gilmer Counties in Georgia, and two counties in Tennessee. This watershed is considered a large water supply watershed by DCA.

- The Freeman Springs (East Chickamauga Creek) watershed area is 7.5 square miles above the intake and almost completely contained within Whitfield County with a small portion extends into Walker County, GA. For the purposes of this assessment, both the surface water watershed of East Chickamauga Creek and the recharge area for Freeman Springs are evaluated for the assessment. The surface water watershed is considered a small drinking water supply watershed by DCA.
- The Mill Creek watershed area is 38 square miles above the intake and is completely contained within Whitfield County, GA. Mill Creek drains a portion of the City of Dalton and is a tributary to the Conasauga River. This watershed is considered a small drinking supply watershed according to DCA.

The Conasauga River, Mill Creek, Coahulla Creek, and Freeman Springs watersheds, source water assessment management zones, and intakes are located in Figure 1.2 and watershed areas are presented in Table 1.2.

There are four reservoirs that are used to supplement river or stream flows during low-flow and/or drought events. The Haig Mill Dam Raw Water Reservoir, with a total storage of approximately 750 million gallons, supplements Mill Creek. The Conasauga River reservoirs numbers 3 & 4, with a combined storage of approximately 800 million gallons, supplement the Conasauga River during low flows. The Haig Mill Dam Raw Water Reservoir has a direct connection to the Mill Creek water treatment plant. The Conasauga River reservoirs also have direct connections to the V.D. Parrott Water Plant. The water treatment plants were designed so that they could be supplied from the reservoirs, and disconnected from surface water withdrawals completely for extended periods of time. Therefore, the reservoirs limit risk by providing an extended period backup in case of any accidental spills into the raw water sources. The River Road reservoir also supplements the Conasauga River during low flows, however river water is pumped into the River Road reservoir for future use and is not directly linked to a water plant. All four of these reservoirs are within the assessment area. However, for purposes of evaluating the risk to the drinking water supply, the drinking water intake at each water filtration plant is used as the point of reference to define the individual assessment area. The reservoirs are also located on Figure 1.2.

Dalton Utilities has a good history of emergency coordination with the Dalton Fire Department and Dalton Police Department. In the event of a spill or other drinking water supply threat, this coordination will allow quick response and preventative measures.

Table 1.2 Watershed Drainage Area Above Intake

Watershed	Acres	Square Miles
Coahulla Creek IMZ	13,508	21.1
Coahulla Creek OMZ	48,922	76.4
Coahulla Creek NMZ	13,951	21.8
COAHULLA INTAKE TOTAL	**76,381**	**119.3**
Conasauga River IMZ	32,176	50.3
Conasauga River OMZ	132,353	206.8
Conasauga River NMZ	32,095	50.1
CONASAUGA INTAKE TOTAL	**196,624**	**307.2**
Freeman Springs IMZ	4,779	7.5
FREEMAN SPRINGS TOTAL	**4,779**	**7.5**
Mill Creek IMZ	22,518	35.2
Mill Creek OMZ	2048	3.2
MILL CREEK INTAKE TOTAL	**24,566**	**38.4**
TOTAL INTAKE AREA	**302,350**	**472.4**

Figure 1.2

SOURCE WATER ASSESSMENT
DALTON UTILITIES

Drinking Water Intakes and Drinking Water Supply Management Zones

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LEGEND

- Drinking Water Intake
- Watershed Boundary
- Management Zone Boundary

Water Treatment Plant Feature

- Raw Water Reservoir
- Water Plant
- Waste Water Treatment Plant
- Waste Water Reservoir
- Major Highway
- Road
- Stream/River
- County Boundary
- Stream Does Not Meet GA EPD 305(b) Designated Use
- Stream Partially Meets GA EPD 305(b) Designated Use

Land Use/Land Cover (1980 EPA GIRAS)

- Urban
- Agriculture
- Forest
- Water
- Mines, Quarries, Transitional Areas

Land Cover (1995 GA DNR)

- Water
- Agriculture
- Urban
- Forest
- No Data

CLEVELAND

BRADLEY CO.

POLK CO.

TENNESSEE

GEORGIA

COAHULLA CREEK INTAKE
OUTER MANAGEMENT ZONE

CONASAUGA RIVER INTAKE
OUTER MANAGEMENT ZONE

Cohutta

Varnell

WHITFIELD CO.

MURRAY CO.

FANNIN CO.

MILL CREEK INTAKE
INNER MANAGEMENT ZONE

FREEMAN SPRINGS INTAKE
INNER MANAGEMENT ZONE

COAHULLA CREEK INTAKE
INNER MANAGEMENT ZONE

CONASAUGA RIVER INTAKE
INNER MANAGEMENT ZONE

Tunnel Hill

Haig Mill Dam
Raw Water Reservoir

DALTON

Mill Creek Intake

Mill Creek
Water Plant

Freeman Springs
Water Filtration Plant

Freeman Springs Intake

Conasauga River Intake

Conasauga River
Raw Water Reservoir

V.D. Parrott Jr
Water Filtration Plant

Coahulla Creek Intake

River Road Raw
Water Reservoir

Eton

CHATSWORTH

Riverbend Road
WWTP

Loopers Bend WWTP

LAS Reservoir

Holly Creek

WALKER CO.

N
W E
S

Scale = 1:200,000

1 0 1 2 3 4 5 Miles

Public Involvement

The goal of the public involvement process is to educate residents in the assessment area about potential impacts to source water quality and to provide opportunities for meaningful input into the recommendations being considered for inclusion in the protection plan. The objectives of the process is to reach out to residents and key stakeholders through a public meeting and by making results available in paper and electronic formats. There was a public meeting held May 31st, 2001 in which the general public was invited via an ad placed in the local newspaper. However, no one from the community attended.

The SWAPP for Dalton Utilities will be made available to the public at the Atlanta EPD office and from the Dalton Utilities office. Dalton Utilities will post the results on their web site at: http://www.dutil.com. Furthermore, a summary of the SWAPP report for Dalton Utilities, including the overall susceptibility determination, will be made available in the publication of the Consumer Confidence Report.

Regulatory Requirements for Source Water Assessment Plans

The 1996 amendments to the Safe Drinking Water Act (SDWA) require states to perform source water assessments for all water supply watersheds within the state's boundaries. The goal of the act is the development and implementation of prevention and protection strategies to address those potential threats to the water supply system identified through the assessment process. This law represents a movement towards a more preventive approach of avoiding contamination of public water supply systems.

The statute requires that states submit an Implementation Plan to the U.S. Environmental Protection Agency (EPA) for conducting the assessments. Georgia submitted such a plan to the EPA on January 29, 1999. The plan was approved on April 24, 2000, and became effective on May 1, 2000.

Responsibility for Conducting Source Water Assessments. The new SDWA requirements apply to public water systems that obtain their water from surface water supplies. Surface water systems that supply water to at least 50,000 people are given the primary responsibility for developing and implementing an assessment and protection plan for their system. However, these systems may make requests to Georgia Environmental Protection Division (EPD) for technical assistance and funding. EPD will have primary responsibility for conducting assessments for all surface water systems supplying water to less than 50,000 people. As such, EPD has generally funded this project through the Regional Development Centers. Dalton Utilities elected to conduct their own assessment.

Assessment Area. For the Source Water Assessment, the entire watershed that drains to the water intake is within the protection area; however, the EPA has given the states flexibility to identify and assess smaller areas or segments of the watershed for a cost and time-effective analysis. Georgia's Plan is based on protection distances defined in the EPD Rules of Environmental Planning Criteria, as part of the Georgia Planning Act of 1989. The plan identifies three assessment zones within the water supply watershed upstream from a given drinking water intake:

- The inner management zone (IMZ) – within a 7-mile radius above the intake,
- The outer management zone (OMZ) – radius between 7 and 20 miles of the intake, and
- The non-management zone (NMZ) – remainder of watershed above the OMZ.

Assessment Requirements. Each assessment must include a delineation of the drinking water supply watershed that drains to the intake location, an inventory of potential pollution and contaminant sources, and a determination of the susceptibility of the drinking water source to potential contamination. The susceptibility analysis is based on the potential for contaminants to be released into the environment as well as the associated risk to the drinking water supplies. In addition, the results of the assessment must be made available to the population served by the public water system. This information may then be used for developing source water protection plans as part of local comprehensive planning efforts.

SOURCE WATER ASSESSMENT METHODOLOGY

This section includes the assessment methodology for the Dalton Utilities Water Supply intakes. The assessment was conducted following the guidelines outlined in Georgia's Source Water Assessment and Implementation Plan, effective May 1, 2000.

Watershed Delineation

Dalton Utilities withdrawals water at three surface water intakes and one spring considered groundwater under the influence of surface water. These four assessment areas were delineated into Inner Management Zones, Outer Management Zones, and Non-Management Zones. For Freeman Springs, the entire recharge area and surface water drainage are considered the Inner Management Zone. The Freeman Springs (East Chickamauga Creek) and Mill Creek watersheds are small enough to have only Inner Management Zones.

Available Water Quality Data

303(d) Listed Waters. According to the Georgia 303(d) list, the study area contains the following listed waters:

- Main stem of the Conasauga River from the water supply intake to just north of Highway 286. This stream segment is classified as "Supporting" designated uses.
- Main stem of Coahulla. This stream segment is classified as "Partially Supporting" designated uses due to fecal coliform from non-point sources.

Cryptosporidium and Giardia. *Giardia* and *cryptosporidium* have been identified as a leading cause of waterborne diseases in the United States. Dalton Utilities has conducted *cryptosporidium* and *giardia* sampling at three intakes for the first four months of 2001 and in early 1998 and 1999. Coahulla Creek is a secondary back-up for the V.D. Parrott plant. When Coahulla Creek water is used, it is blended with water from the Conasauga River. The total percentage of Coahulla Creek water used is very low, thus less frequent sampling of this intake was conducted, four times in the year 2001. However one sample was invalid due to low percent recovery on a matrix spike. C*ryptosporidium* oocysts been identified at very low levels in the Consasauga River, Coahulla Creek, and Mill Creek. *Giardia* cysts were detected in all 2001 sampling in the Conasauga River, Coahulla Creek, and Mill Creek sampling locations. USEPA Method 1623 was used to determine the presence or absence of cysts and oocysts. Dalton Utilities filtered the samples before sending to a private laboratory for analysis.

Table 1.3 Cryptosporidium and Giardia Sampling Results

Coahulla Creek	Cryptosporidium Results		Giardia Results	
	Total Count / Vol. Examined	Calc. Number / Liter	Total Count / Vol. Examined	Calc. Number / Liter
May 2, 2001	Invalid Sample	Invalid Sample	Invalid Sample	Invalid Sample
May 29, 2001	0.0	0.0	22.0	2.2
June 11, 2001	1.0	0.1	13.0	1.3
June 19, 2001	0.0	0.0	12.0	1.2

Conasauga River	Cryptosporidium Results		Giardia Results	
	Total Count / Vol. Examined	Calc. Number / Liter	Total Count / Vol. Examined	Calc. Number / Liter
March 1998	None detected	None detected	None detected	None detected
January 1999	None detected	None detected	None detected	None detected
January 2001	0.0	0.0	29.0	0.6
February 2001	3.0	0.3	15.0	1.5
March 2001	3.0	0.3	3.0	0.3
May 2001	2.0	0.2	16.0	1.6

Freeman Springs	Cryptosporidium Results		Giardia Results	
	Total Count / Vol. Examined	Calc. Number / Liter	Total Count / Vol. Examined	Calc. Number / Liter
March 1998	None detected	None detected	None detected	None detected
January 1999	None detected	None detected	None detected	None detected
January 2001	0.0	0.0	0.0	0.0
February 2001	0.0	0.0	0.0	0.0
March 2001	0.0	0.0	0.0	0.0
May 2001	0.0	0.0	0.0	0.0

Mill Creek	Cryptosporidium Results		Giardia Results	
	Total Count / Vol. Examined	Calc. Number / Liter	Total Count / Vol. Examined	Calc. Number / Liter
March 1998	None detected	None detected	None detected	None detected
January 1999	None detected	None detected	None detected	None detected
January 2001	0.0	0.0	16.0	0.3
February 2001	1.0	0.1	25.0	2.5
March 2001	0.0	0.0	36.0	3.6
May 2001	0.0	0.0	48.0	4.8

Other Water Quality Data. Dalton Utilities has conducted extensive water quality sampling and fish and macroinvertebrate sampling within the assessment areas. Water quality appears generally good. Appendix F summarizes this data.

Potential Pollution and Contaminant Source Inventory

Potential pollution and contaminant source data were downloaded from the Georgia GIS data Clearinghouse. These data included sites listed in EPD guidance classifications, including the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Industrial Facility Discharge (IFD), Toxic Release Inventory (TRI), Hazardous Site Inventory (HSI), National Pollution Discharge Elimination System (NPDES), etc. Metadata and other date/source references for the data were also obtained. Definitions of above federal and state potential pollution source classifications are outlined in Appendix A. Classification or listing of a potential service can provide general information helpful in the susceptibility analysis for assessing both release and risk potential.

EPA and EPD web sites were inventoried to obtain any outstanding data not available at the Georgia GIS Data Clearinghouse sites. Various web sites were queried to obtain information that is more detailed and to verify that data were up-to-date. Information such as the possible type of potential pollutant (e.g., specific hazardous waste/chemicals or type of agricultural waste lagoon), volume of potential pollutant (e.g., <1,000 gallons or >10,000 gallons), and/or any history of spills were obtained. Businesses or facilities no longer in existence/operation or those that have been removed from the above listings were eliminated from the contaminant inventory.

The following agencies were contacted to supplement the national databases:

- Dalton Fire Department
- Dalton Utilities
- Natural Resource Conservation Service in Gainesville and Dalton
- Environmental Protection Division, Program Coordination Branch (Emergency Response)
- Tennessee Department of Environment and Conservation, Division of Water Pollution Control
- Murray County and Whitfield County Governments
- North Georgia Regional Development Center

Land Cover

Land coverage was obtained to help assess non-point source influences to water quality in water supply watersheds. Satellite imagery was used to identify agricultural waste lagoons and confined animal feedlots. Land cover information from 1990 was available for Whitfield and Murray Counties, Tennessee and other area utilized older land cover data.

The land cover categories are listed below:

- Water—includes open bodies of water, major rivers
- Agricultural—includes row crops, pasture land and orchards
- Forest—includes coniferous, deciduous and mixed forest
- Urban—includes residential, commercial, industrial and other urban land use types
- Wetland—includes forested wetlands (swamp) and non-forested wetlands (marsh, bog)
- Traditional Mines, quarries and exposed rock/soil—includes quarries, clear cut areas and new urban construction

Susceptibility Determination

Susceptibility of drinking water supplies to potential contaminants is determined using the methodology established by EPD. A qualitative measure (high, medium, low) is used to rank both the likelihood of a **release** of a contaminant and the **risk** of that contaminant to the drinking water supply. Factors that impact the likelihood of a release for point sources include: distance from any surface water, volume of release, duration of release, and ease of transport. Risk factors for point sources include distance to surface water intake and toxicity.

For the non-point source pollution categories of agriculture, forestry and urban land uses, EPD provides supplemental guidance to rank potential contaminants. The potential for release include factors such as density of an activity in the watershed, BMP use, buffer zones, and topography. Risk factors include proximity to water, volume of release, and toxicity.

A summary chapter of assessment results for each watershed follows this section. The summary chapter highlights specific categories of potential pollutant sources and overall susceptibility to drinking water supplies. Please refer to Figure 1.3 for specific locations of potential pollutant sources. Appendices B, C, D, and E provide a complete record of the assessment results for potential point and non-point sources within each of the four water supply watersheds.

Assessment Assumptions. The following is a list of the various assumptions made in performing the susceptibility analysis for Dalton Utilities.

General Assumptions

- The distance from surface water, ease of travel/transport, and distance from surface water intake are assessed based on analysis using the GIS of the watershed areas.
- When assigning values for the Overall Release and Risk Potentials, the individual high, medium, and low rankings are typically averaged. However, the toxicity determination typically carries more weight than the distance from surface water intake in the Overall Risk Potential for a facility. For example, if a low toxicity pollutant is in close proximity to a surface water intake (i.e., medium risk) the Overall Risk Potential is usually assigned a low value.

Figure 1.3
DALTON UTILITIES DRINKING WATER SUPPLY WATERSHEDS POTENTIAL POLLUTION SOURCES

MAP SOURCES: US EPA (1999), Georgia DNR (1995), Georgia DOT (1995), Georgia EPD (1999), EPA GIRAS (1978), US Census Bureau (1990)

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LEGEND

Potential Non Point Pollution Sources
- Airport
- Agricultural Waste Pond
- Confined Animal Feeding Operation

Potential Point Pollution Sources
- Primary Road Crossing
- Gas Pipeline Crossing
- HSI (GA EPD)
- Industrial Facilities Discharge (US EPA)
- Landfill
- Dalton Utilities Lift Station
- Mining Operation
- NPDES Permit (GA EPD)
- Railroad Crossing
- Toxic Release Inventory (TRI)
- RCRIS (US EPA)
- Drinking Water Intake
- Water Supply Watershed Boundary
- Management Zone Boundary

Water Treatment Plant
- Raw Water Reservoir
- Water Treatment Plant
- Wastewater Treatment Plant
- Wastewater Reservoir
- Gas Line
- Railroad
- Major Highway
- Road
- Stream/River
- County Boundary
- Dalton Utilities Sewer Service Area
- Stream Partially Meets 303(d) Designated Use

EPA GIRAS Land Use (Lighter Colors)
- Urban
- Agriculture
- Forest
- Water
- Mines, Quarries, Transitional Areas

Land Cover (GA DNR 1990 - Darker Colors)
- Water
- Agricultural
- Urban
- Wetland
- Forest
- No Data

BALLARD TRUCK PARTS
BALLARD'S AUTO PARTS
CLEVELAND
WAMPLER'S USED AUTO PARTS
J.L. CHANEY TRUCK RENTAL
SIMPSON CONSTRUCTION COMPANY
SOUTHEASTERN MATERIALS
CENTRAL APSHALT, INC.
COAHULLA INTAKE NMZ
OMZ
TYLAN DAVIS PROPERTY
J & S POULTRY FARM
BRADLEY CO
Felker
Mill Creek
POLK CO
CONASAUGA RIVER LUMBER COMPANY
CONASAUGA INTAKE NMZ
Conasauga
Jacks Creek
OMZ
COAHULLA INTAKE OMZ
TENNESSEE
GEORGIA
COHUTTA NUMBER TWO
Cohutta
Coahulla Creek
Sugar Creek
Conasauga River
ROSTEX AIRPORT
CONASAUGA INTAKE OMZ
FANNIN CO
DALTON-MCGAUGHEY CH RD TRANSFER STATION
LANSKI PROPERTY--TALC INDUS INC
Varnell
CONAGRA POULTRY HATCHERY
VARNELL ELEMENTARY SCHOOL
MURRAY CO
BLUE BIRD FIELD
MILLIKEN AND CO. (DESIGN CN.)
IMZ
PRATER MILL FLIGHTPARK
GEORGE CLINE PROPERTY
River Road Raw Water Reservoir
R.M. HARRIS FIELD
US XPRESS INC
WHITFIELD CO
Diamond Rug and Carpet Mills - Eton Plant
COAHULLA INTAKE IMZ
Polychem, LTD
BROWNING MFG DIVISION
Tunnel Hill
COUNTY QUARRY
VULCAN MATERIALS
CONASAUGA INTAKE IMZ
R.H.ONEAL PROPERTY
C.C. AND J.H. KEITH PROPERTY
J.K. KEITH PROPERTY
JOY TRUCK LINES
GILMER CO
MILL CREEK INTAKE IMZ
Hagg Mill Pit Raw Water Reservoir
COOPER PIT
DAWNVILLE ELEMENTARY SCHOOL
Eton
ACS FIBERS
AMERICAN SAMPLE SYSTEMS INC
SCHERING-PLOUGH HEALTHCARE PRODS.
D & W CARPET & RUG CO INC
WINDMERE #5 L/S
FIBRO CHEM INC.
WINDMERE #1 L/S
CONASAUGA RIVER INTAKE
HAYES ROCK MINE
CHAPCO SOUTH
WINDMERE #2 L/S
PLAYFIELD IND-CHATSWORTH
TUFTING MACHINE COMPANY
GALAXY CARPET MILLS INC. CHATSWORTH FACILITY
N BROADWICK DR L/S
C.C. KEITH PROPERTY
ROADTEC
WOODSDALE L/S
SHAW INDUSTRIES PLANT 84
MOHAWK INDUSTRIES, INC
CIRCLE M FOOD SHOP #10
HOLLYBROOK L/S
MURRAY COUNTY MEMORIAL HOSPITAL
BLUE RIDGE MTN CONTRACT CARRIERS
WHISPERING PINES MHP
CONASAUGA RIVER RAW WATER RESERVOIR
CHATSWORTH
Freeman Springs Water Filtration Plant
SOUTHERN TALC SLATE PIT
V.D. PARROTT WATER FILTRATION PLANT
BETTER BACKERS INC
FREEMAN SPRINGS INTAKE
DALTON COLLEGE
ROCKY FACE-WESTSIDE LANDFILL
DALTON
AMBERFIELD L/S
COAHULLA CREEK INTAKE
RICKS TEXACO
FREEMAN SPRINGS INTAKE IMZ
CLASSIC ESTATES L/S
MILL CREEK INTAKE
DALTON CITY QUARRY
Riverbend Road WWTP
Loopers Bend WWTP
IMZ
FREEMAN SPRINGS GROUNDWATER RECHARGE ZONE
LAS Reservoir
WALKER CO
LAND APPLICATION SYSTEM AREA
Conasauga River

N
W E
S

Scale = 1:80,000

1 0 1 2 3 4 5 6 7 8 9 10 Miles

Industrial Point Sources

- Volume of release is estimated by gathering data from the SARA Title III Tier II reports provided by the EPD, which indicate the amount and types of chemicals stored at facilities. Where Tier II data are not available, best professional judgment is utilized. Data on duration of release, volume of release, and toxicity are also obtained through information available on EPD's Hazardous Site Inventory.
- When necessary, field visits were made to verify that secondary containment measures were in place. Field verified secondary containment and other engineering controls were used to lower the volume and duration of release potential.
- Duration of release is determined through TRI reports, indicating releases to the environment, databases available on the EPD website, indicating where environmental releases and spills have occurred over the past 10 years. If a facility does not exist on EPD's TRI reporting of releases or other data sources indicating environmental spills and releases, it is assumed that no reported releases have occurred at the site and the duration of release is ranked low.
- A determination of the toxicity is made by reviewing information from the TRI reports, 312 Tier II data, NPDES permit parameters, spill information, and best professional judgment to understand the types of hazards stored on site. Fecal coliform is typically rated as having a high toxicity because of its immediate risk to human health. Flammable or explosive substances (petroleum distallates, for example) and other types of chemicals that may have serious, but long-term impacts are ranked as medium toxicity.

Non-Point Pollution Sources Assessed

According to EPD's guidance document, four categories of non-point source runoff should be considered for the assessment: Agriculture, Forestry, Urban, and Non-Sewer (areas served by septic tanks) Areas. Sewer Areas were assessed together with Urban Areas due to the overlap of these two categories.

Agriculture. The non-point runoff from agricultural areas was assessed for each intake and management zone. Land use and land cover files from GIS databases were used to determine relative density of agricultural lands. Agriculture uses generally cover grazing lands, row crops, poultry and other livestock operations. Agricultural non-point source pollution is considered a low to medium risk to source waters in all management zones. Risk factors include livestock density, chemical application buffers, and proximity to surface waters. Two specific categories of agriculture are Confined Animal Feedlot Operations and Agriculture Waste Lagoons, which are discussed below as potential point sources.

Forestry. Forestry activities have limited risk to water supplies. Sediment is the main pollutant associated with this activity. Risk of sedimentation is raised when forestry activities are conducted on steeper slopes or adjacent to streams.

Urban. Urban areas constitute a potential contaminant source for source waters from commercial and industrial stormwater runoff, road runoff, runoff from fertilizers and pesticides applied to lawns, other types of stormwater runoff, and sanitary sewer overflows from sewer lines which cross creeks. The impacts from the sewered areas are included in the analysis of the urban areas. In addition, due to the increased impervious surfaces, stormwater velocities are higher in urban streams that increase in-stream erosion.

Non-Sewer (Septic). Septic tanks provide a threat to drinking water supplies when systems fail. National studies have determined that approximately 5 to 10 percent of septic systems are failing at any one time. The potential presence of pathogens presents a high toxicity risk. Transport through soil to surface waters generally mitigates the overall risk with a low or medium release potential. Some areas were assumed to have a lower population density (i.e. Freeman Springs IMZ) than other areas (i.e. Conasauga River IMZ), which lowered the overall release potential.

Point Pollution Sources Assessed

Agricultural Waste Lagoons. Agricultural waste lagoons present a potential risk to drinking water supplies if a lagoon dams breaks and releases high concentrations of nutrients, bacteria and other materials to nearby streams. The volume associated with such a release would be over 10,000 gallons, indicating a high ranking for volume of release. The duration would be rated low, as the possibility of this happening is not very likely. The distance from surface water intake, distance from surface water and ease of transport are calculated individually for each lagoon located through GIS. The toxicity is assumed to be medium to high, due to the high concentrations of bacteria and potential pathogens in the lagoons. One example of such a waste lagoon is with a hog lot located directly on the Conasauga River.

Airports. Airports can present a potential risk to drinking water supplies due to the highly flammable aviation fuel that is stored on site. The airports within the four water supply watersheds are smaller fields; therefore, the volume of release is estimated to be medium, between 1,000 and 10,000 gallons. The toxicity is ranked medium, due to the presence of jet fuel onsite. Storage tanks are assumed to be double-walled underground tanks, reducing the possibility of accidental release. In addition, the duration of release is estimated to be low since there is little likelihood that a spill will occur due to the containment that is required for fuel storage areas.

Confined Animal Feedlot Operations (CAFOs). Row houses were delineated based on aerial photography. Row houses are assumed to contain poultry unless otherwise indicated. EPA's proposed rules on CAFOs determine that more than 500 (or in one version more than 1000) animal units were to be considered CAFOs and subject to new effluent regulations. Distances to surface waters and from water intakes were calculated for each CAFO. Release potential was determined based on distance to a waterbody and topography. Volume and duration of potential releases are considered low because the animals are under cover. Toxicity is considered medium because poultry wastes have the potential to carry pathogens, but they are typically dry products and are not readily transported to surface waters. Also, local experts indicate many of the row houses delineated in this study are no longer operational. All CAFOs are mapped on Figure 1.3.

Industries, Manufacturing Facilities and Businesses. Several industries, manufacturing facilities, and other businesses that store and handle potential contaminants are located within the water supply watersheds. These facilities include large industries that store, use, or generate hazardous chemicals, bulk petroleum products, or chemicals on site. Also included in this category are facilities with NPDES permits, and facilities on Georgia EPD's Hazardous Site Inventory.

NPDES facilities have a permit to discharge directly to a receiving stream and are therefore designated with a medium potential for duration of release since they have on-going, permitted releases. For facilities with NPDES permits in Georgia, a search of EPD records was conducted to determine if sites were meeting permit conditions or chronically exceeding the permit limits. The state of Tennessee issues NPDES permits to CAFOs and industrial stormwater sites, so these were included in the NMZ for the Coahulla Creek water supply watershed, even though they would not have been included if they were in Georgia. The NPDES sites in Tennessee was always ranked low since all of these sites were either CAFOs or industrial stormwater facilities and were much less likely to pose a significant release potential to the water supply watershed.

Small quantity generators, as designated in the RCRIS database in EPA's Envirofacts system, are given a low volume of release unless additional data from the SARA Title III Tier II reports indicate additional storage of chemicals and other substances on site. For RCRA sites without a designation, the volume of release is also ranked low (less than 1,000 gallons). No large quantity generators are located within the four water supply watersheds.

Landfills and Garbage Transfer Stations. Abandoned, closed, and operating landfills are a potential pollutant source for water supplies, with the degree of impact depending upon the type of waste collected at the site and the design of the landfill itself (i.e., lined vs. unlined, leachate collection system, landfill cap design, etc.). In addition, garbage transfer stations can be a source of pollution due to liquids leaching from the waste haulers. The toxicity is estimated to have a medium risk potential due to the waste characterization of typical household solid waste. In addition, the volume and duration of release are low potential factors since release from these sites are slow processes, influenced by precipitation and the amount of liquid waste present.

Lift Stations. Municipal lift stations (i.e., pumping stations) transfer sanitary sewer flows from one location within the wastewater collection system to another location, generally at a higher elevation. These facilities can pose a threat to the surrounding waterbodies during storm events or when operational problems exist, causing sanitary sewer overflows (SSOs) in the vicinity of the station or in the upstream collection system. Dalton has upgraded all of their lift stations with telephone dialers that automatically contact maintenance personnel in the event of a spill or mechanical malfunction. There are also maintenance visits twice a week to all lift stations These engineering controls mitigate release potential. The size of the SSO is dependent upon how quickly existing problems at the station are corrected and the duration and size of the storm event. The risk from these stations is based on a high toxicity since SSOs are spills of raw sewage.

Mining. Surface mines can affect surface water quality, primarily through transport of sediments and metals via stormwater runoff. In addition, some mines may have washing operations to clean the ore that is mined that contribute to surface water impacts. Both existing and past producers are included in the susceptibility analysis for the four water supply watersheds. Data on the type of mining conducted or being conducted at the sites influence the risk and release potential that are assigned to each site. Based on the type of mining done in the four watersheds, suspended sediments and metals are the key pollutants of concern, indicating a low to medium toxicity value. Since runoff from washing operations and stormwater are the main concerns, the volume of release is estimated to have a low potential. The duration of release for currently producing mines is estimated to be medium, to account for on-going washing operations that may be taking place, while the past producing or closed mines are ranked low, since stormwater runoff is the only discharge of concern.

Roadways. Primary road crossings over streams and rivers present a potential for contamination through spills. The materials being transported will vary greatly; however, to gauge the potential risk, hazardous materials are assumed to be transported on roads. Volume of release is estimated to be between 1,000 - 10,000 gallons potential from tractor-trailers, a medium release ranking. The duration of the release is assumed to be a likelihood of one-time unanticipated release or medium release possibility. The toxicity risk is assumed to be medium, consisting of hazardous chemicals from transport trucks. The distance from surface water and ease of transport were calculated individually for each road crossing. The distance from the surface water intake was calculated by averaging the distances between each crossing and the intake to get an overall value for this risk factor.

In order to standardize the ranking of roads within a watershed area including primary, secondary paved, and secondary unpaved, the following supplemental guidance was developed and utilized by Brown and Caldwell as follows:

- Primary roads (interstates and highways):

RELEASE POTENTIAL	RISK POTENTIAL
> 10 road crossings, **High**	Large transport trucks, **Medium**
5 – 10 road crossings, **Medium**	Large transport trucks, **Medium**
< 5 road crossings, **Low**	Large transport trucks, **Medium**

- Secondary roads, paved:

RELEASE POTENTIAL	RISK POTENTIAL
> 100 road crossings, **High**	Large transport trucks, **Medium**
50 – 100 road crossings, **Medium**	Large transport trucks, **Medium**
< 50 road crossings, **Low**	Large transport trucks, **Medium**

- Secondary roads, unpaved:

RELEASE POTENTIAL	RISK POTENTIAL
> 100 road crossings, **High**	No large transport trucks, **Low**
50 – 100 road crossings, **Medium**	No large transport trucks, **Low**
< 50 road crossings, **Low**	No large transport trucks, **Low**

Railways. Railroad crossings over streams and rivers present a potential for contamination through spills. As with roadways, the materials being transported will vary greatly. Hazardous materials are assumed to be transported on the railroads, with the volume of the release assumed to be greater than 10,000 gallons, while giving a high ranking. The duration of the release is assumed to be high, with a likelihood of a one-time unanticipated release. The toxicity is assumed to medium. The distance from surface water and ease of transport were calculated individually for each railway crossing. As with the roads, the distance from the surface water intake was calculated by averaging the distances calculated for each crossing.

The supplemental guidance used for railroad crossings was the same as used for primary roads, and took density of crossings within each management zone into account as follows:

RELEASE POTENTIAL	RISK POTENTIAL
> 10 railroad crossings, **High**	Tanker cars, **High**
5 – 10 railroad crossings, **Medium**	Tanker cars, **High**
< 5 railroad crossings, **Low**	Tanker cars, **High**

Pipelines. Natural gas pipelines over streams and rivers present a potential for contamination through spills. The volume of possible releases is assumed to be low, since the chemicals and substances being transported are volatile. The duration of release is assumed to be low, with little likelihood of release. The toxicity is also assumed to be low, due to rapid loss through volatilization. The distance from surface water and ease of transport were calculated individually for each pipeline crossing. As with the roads and railroads, the distance from the surface water intake was calculated by averaging the distances calculated for each crossing.

The supplemental guidance used for pipeline crossings took density of crossings within each management zone into account as follows:

RELEASE POTENTIAL	**RISK POTENTIAL**
> 10 pipeline crossings, **High**	Volatile substances, **Low**
5 – 10 pipeline crossings, **Medium**	Volatile substances, **Low**
< 5 pipeline crossings, **Low**	Volatile substances, **Low**

SOURCE WATER ASSESSMENT SUSCEPTIBILITY RESULTS

COAHULLA CREEK INTAKE

The following information summarizes specific categories of potential pollutants for Coahulla Creek. A complete listing of the sites included in the susceptibility analysis is provided in Appendix B. The overall susceptibility ranking for Coahulla Creek is low.

Non-Point Source Assessment

According to EPD's guidance document, four categories of non-point source runoff are considered for the assessment of non-point sources - agriculture, forestry, non-sewer, and urban areas. Sewer areas are included within the urban area assessment.

Agriculture. Within the Coahulla Creek watershed, agriculture factors which present medium risk to water supplies include livestock density, moderate topography, use of agricultural chemicals, and risks associated with chemicals, animals, and waste products. Agricultural areas ranked as medium risk and release potential in both the IMZ and OMZ.

Forestry. Forestry activities demonstrate limited risk to the Coahulla Creek water intake. Moderate forestry activities are assumed to occur in the OMZ of the Coahulla Creek watershed, with more limited activities in the IMZ.

Urban. The IMZ of Coahulla Creek ranks as a medium risk for pollution from urban areas because it drains sections of the city of Dalton. The OMZ is ranked low because there are no major cities in this area. Southern sections of Cleveland, Tennessee are located in the NMZ, and present a low risk due to he distance from the intake.

Non-Sewer (Septic). Non-sewer areas present high potential risk due to the possible presence of pathogens leaching from failing systems. However, the release is tempered by transport through soil and groundwater to reach surface water supplies. A higher population density is assumed closer to Dalton (yet outside the sewer service area). Therefore the IMZ ranks as a high risk and medium release potential while the OMZ ranks as high risk and a low release potential.

Point Source Assessment

Agricultural Waste Lagoons. In the Coahulla Creek watershed, 2 agricultural waste lagoons are located in the IMZ. These lagoons were identified through analysis of existing aerial photography. Based on proximity to surface waters and distance from the intake, both present potential contamination sources.

Airports. No airports are located in the Coahulla Creek watershed.

Confined Animal Feedlot Operations (CAFOs). Upstream of the Conasauga River intake, 30 CAFOs areas exist within the IMZ and OMZ. The breakdown is 15 within the IMZ and 15 within the OMZ. Assuming these are chicken houses, the risk and release factors are low to medium due to the dry nature of animal wastes and general practice of hauling litter away from the site.

Industries, Manufacturing Facilities and Businesses. Most of the industrial facilities in the Coahulla Creek area are clustered near the city of Dalton (Figure 1.3), with a number of NPDES-permitted CAFOs and industrial stormwater sites located in Cleveland, Tennessee. The facilities included in the susceptibility analysis detailed in Appendix B are listed by management zone below:

IMZ

- Vulcan Materials Rock Quarry (NPDES)
- Whispering Pines Mobile Home Park (NPDES)
- Joy Truck Lines (RCRA Site)

OMZ

- Varnell Elementary School (NPDES)
- J&S Poultry Farm (NPDES – CAFOs)
- Tylan Davis Property (NPDES – CAFOs)
- ConAgra Poultry Hatchery (IFD/TRI Site)

NMZ

- Ballard's Auto Parts (NPDES – Industrial Stormwater)
- Ballard Truck Parts (NPDES – Industrial Stormwater)
- Central Asphalt (NPDES – Industrial Stormwater)
- J.L. Chanley Truck Rental (NPDES – Industrial Stormwater)
- Simpson Construction Company (NPDES – Industrial Stormwater)
- Southeastern Materials (NPDES – Industrial Stormwater)
- Wampler's Used Auto Parts (NPDES – Industrial Stormwater)

Whispering Pines mobile home park and Varnell Elementary ranked as higher risk due to past permit violations and the possible presence of pathogens in wastewater.

Landfills and Garbage Transfer Stations. No landfills are located within the Coahulla Creek watershed, but one transfer station is present within the OMZ:

- Dalton-McGaughey Chapel Transfer Station

Lift Stations. There are two lift stations that are located within the Coahulla Creek watershed, and are maintained and operated by Dalton Utilities:

- Amberfield Lift Station
- Classic Estates Lift Station

Both of these stations located within the IMZ are smaller stations (less than 1 million gallons per day of pumping capacity) and have not experienced SSOs in the past. However, they rank as a high risk due to the presence of possible pathogens and close proximity to surface waters.

Mining. Four mining operations, two operational and two closed, are located upstream of the Coahulla Creek Intake:

IMZ
- Cooper Pit – existing stone mine
- County Quarry – past producer of stone

OMZ
- Cohutta Number Two – past producer of manganese
- Lanski Property (Talc Industries Inc.) – existing manganese mine

Roadways. The primary roads that cross surface waters within the Coahulla Creek watershed include the following:

IMZ
- Georgia Highway 71

OMZ
- Georgia Highway 2
- Georgia Highway 71
- Tennessee Highway 60

Each road crossing was not evaluated individually; instead the entire stretch of highway within a particular management zone was evaluated for overall release and risk potential. Secondary roads that cross streams within the Coahulla Creek watershed are not included in this list.

Railways. The Norfolk Southern railroad crosses streams within the Coahulla Creek watershed at multiple locations within the IMZ. As with the roads, these crossings are not evaluated individually. The railroad's overall impact is assessed by management zone.

Pipelines. There are multiple natural gas pipeline stream crossings within the IMZ and OMZ of the Coahulla Creek watershed. As with road and railroad crossings, potential impacts from the entire pipeline are evaluated, rather than each individual crossing.

Susceptibility Results

Figure 1.3 illustrates the delineation of assessment areas and gives the location of the potential pollution sources. The inner management zone (IMZ) is approximately 21 square miles. The outer management zone (OMZ) encompasses approximately 76 square miles. The EPD Source Water Assessment guidance for surface source water was used to rank individual potential pollution sources according to their potential for release and their potential risk to source water. Appendix B gives the complete inventory of contaminants along with the individual rankings for the release and risk potential along with a justification for each.

Overall, the Coahulla Creek watershed ranked as a low risk. There are both point and non-point source of concern in the Coahulla Creek watershed. The only point source to rank in the high risk/high release category is Whispering Pines Mobil Home Park, due to chronic permit violations, potential for transmission of pathogens, and close proximity to the intake. The other point source that is a high risk/medium release threat is Varnell Elementary due to a past permit violations, potential for transmission of pathogens, and relative proximity to the intake. Other categories of potential pollutants ranking higher in this assessment include railroad and road crossings and the associated potential for spills, non-sewer areas, agriculture waste lagoons with high bacteria, BOD, and nutrient concentrations, and lift stations with the potential for spills.

Table 1.4 illustrates the matrix of potential contaminant rankings. EPD's source water assessment guidance was used to calculate the relative percent of occurrence of contaminants within each priority zone and the overall susceptibility. Sources listed as occurring in both the IMZ and OMZ were weighted separately for the overall susceptibility. The largest number of potential sources (72%) was ranked as low priority. Medium and high priority contaminants represent 20 and 8 percent, respectively, of the total. The overall susceptibility of the intake is rated low based on this analysis.

Table 1.4 Matrix Summary for Potential Contaminant Rankings in the Coahulla Creek Water Supply Watershed

Risk Potential \ Release Potential	LOW	MEDIUM	HIGH
HIGH	▪ Non-Sewer areas (OMZ) ▪ 2 Lift Stations (IMZ)	▪ Varnell Elem. (OMZ) ▪ Non-Sewer areas (IMZ) ▪ Ag waste pond (IMZ)	▪ Whispering Pines (IMZ)
MEDIUM	▪ Joy Truck Lines (IMZ) ▪ Dalton-McGaughey Station (OMZ) ▪ 16 CAFOs (IMZ & OMZ) ▪ Secondary roads, paved (OMZ)	▪ ConAgra Poultry (OMZ) ▪ Agricultural areas (IMZ & OMZ) ▪ Urban areas (IMZ) ▪ 4 Primary roads (IMZ & OMZ) ▪ Secondary roads, paved (IMZ) ▪ 2 Natural gas pipelines (IMZ & OMZ)	▪ Ag waste pond (IMZ) ▪ Norfolk Southern railroad (OMZ)
LOW	▪ County Quarry (IMZ) ▪ Forest areas (IMZ) ▪ Urban areas (OMZ) ▪ Secondary roads, unpaved (OMZ) ▪ 14 CAFOs (IMZ & OMZ)	▪ 3 Mines (IMZ & OMZ) ▪ 7 NPDES – Ind. SW (NMZ) ▪ Vulcan Materials Quarry (IMZ) ▪ Forest areas (OMZ) ▪ 2 NPDES – CAFOs (OMZ)	

Risk Potential ↑ (HIGH / MEDIUM / LOW)

Release Potential → (LOW / MEDIUM / HIGH)

High Priority Contaminants:	8%
Medium Priority Contaminants:	20%
Low Priority Contaminants:	72%

SOURCE WATER ASSESSMENT SUSCEPTIBILITY RESULTS

CONASAUGA RIVER INTAKE

The following information summarizes specific categories of potential pollutants for the Conasauga River intake. A complete listing of the sites included in the susceptibility analysis is provided in Appendix C. The overall susceptibility ranking for the Conasauga River is low.

Non-Point Source Assessment

According to EPD's guidance document, four categories of non-point source runoff are considered for the assessment of non-point sources - agriculture, forestry, non-sewer (septic tanks), and urban areas. Sewer areas are included within the urban area assessment.

Agriculture. Within the Conasauga River watershed, agriculture factors which present medium risk to water supplies include livestock density, moderate topography, use of agricultural chemicals, and risks associated with chemicals, animals, and waste products. Agricultural areas ranked as medium risk and release potential in both the IMZ and OMZ.

Forestry. Forestry activities demonstrate limited risk to the Conasauga River water intake. Moderate forestry activities are assumed to occur in the OMZ of the Conasauga River watershed, with more limited activities in the IMZ. A significant portion of the Conasauga River OMZ contains forest land, providing watershed protection compared with other land uses.

Urban. The IMZ of Conasauga River ranks as a medium risk for pollution from urban areas because it drains a section of Chatsworth in relative close proximity to the intake. The OMZ is ranked low because there are no major cities in this area.

Non-Sewer (Septic). Non-sewer areas present high potential risk due to the possible presence of pathogens leaching from failing systems. However, the release is tempered by transport through soil and groundwater to reach surface water supplies. A medium population density is assumed in both the IMZ and OMZ, therefore the both areas rank as a high risk and medium release potential.

Point Source Assessment

Agricultural Waste Lagoons. In the Conasauga River watershed 9 agricultural waste lagoons have been identified in both the IMZ and the OMZ. These lagoons were identified through analysis of existing aerial photography. Based on proximity to surface waters and distance from the intake, all present potential contamination sources.

Airports. Four airports are located within the Conasauga River watershed as follows:

IMZ

- Prater Mill Flight Park

OMZ

- Rostex Airport
- Blue Bird Field
- R.M. Harris Field

Confined Animal Feedlot Operations (CAFOs). Upstream of the Conasauga River intake, 58 CAFOs have been identified within the IMZ and OMZ. The breakdown is 18 within the IMZ and 40 within the OMZ. Assuming these are chicken houses, the risk and release factors are low to medium due to the dry nature of animal wastes and general practice of hauling litter away from the site.

Industries, Manufacturing Facilities and Businesses. Most of the industrial facilities in the Conasauga River area are clustered near the cities of Chatsworth and Eton (Figure 1.3). The facilities included in the susceptibility analysis detailed in Appendix C are listed by management zone below:

IMZ

- Dawnville Elementary School (NPDES)
- Playfield Industry – Mill C (IFD Site)
- Better Backers Inc. (RCRA Site)
- Galaxy Carpet Mills, Inc. (RCRA/TRI Site)
- Mohawk Industries, Inc. (RCRA Site)
- Murray County Memorial Hospital (RCRA Site)
- Shaw Industries Inc., Plant 84 (RCRA Site)
- Schering-Plough Healthcare Products (TRI Site)

OMZ

- Milliken and Co. Design CN – aka Cohutta Springs Conference Center (NPDES)
- Conasauga River Lumber Co. (NPDES – Industrial Stormwater)
- Diamond Rug and Carpet Mills – Eton Plant (Hazardous Waste Facility/RCRA Site)
- ACS Fibers (RCRA Site)
- Browning Mfg. Division (RCRA Site)
- D&W Carpet & Rug Co., Inc. (RCRA Site)

Landfills and Garbage Transfer Stations. No landfills are located within the Conasauga River watershed.

Lift Stations. There are no lift stations located within the Conasauga River watershed.

Mining. Seven mining operations, all closed, are located upstream of the Conasauga River intake. They are broken down by management zone as follows:

IMZ

- C.C. Keith Property – past producer of Barite
- George Cline Property – past producer of Barite
- Hayes Rock Mine – past producer of stone
- Southern Talc Slate Pit – past producer of stone

OMZ

- C.C. and J.H. Keith Property – past producer of iron
- J.K. Keith Property – past producer of iron
- R.H. O'Neal Property – past producer of iron

Roadways. The primary roads that cross surface waters within the Conasauga River watershed include the following:

IMZ

- Georgia Highway 225
- Georgia Highway 286
- U.S. Highway 411
- U.S. Highway 76

OMZ

- Georgia Highway 225
- Georgia Highway 2
- Tennessee Highway 313
- Tennessee Highway 74
- U.S. Highway 411

Each road crossing was not evaluated individually; instead the entire stretch of highway within a particular management zone was evaluated for overall release and risk potential. Secondary roads that cross streams within the Conasauga River watershed are not included in this list.

Railways. The CSX railroad crosses streams within the Conasauga River watershed at multiple locations within the IMZ and OMZ. As with the roads, these crossings were not evaluated individually. The railroad's overall impact was assessed on a management zone basis. Based on the number of crossings, the release potential is considered high while the risk is considered medium.

Pipelines. There are no gas pipeline stream crossings within the Conasauga River watershed.

Susceptibility Results

Figure 1.3 illustrates the delineation of assessment areas and gives the location of the potential pollution sources. The inner management zone (IMZ) is approximately 50 square miles. The outer management zone (OMZ) encompasses approximately 207 square miles. The EPD source water assessment guidance for surface source water was used to rank individual potential pollution sources according to their potential for release and their potential risk to source water. Appendix C gives the complete inventory of contaminants along with the individual rankings for the release and risk potential along with a justification for each.

Overall, the Conasauga River watershed ranks as a low susceptibility to potential pollutant sources. This is consistent with the large size of the watershed, the large portion of the watershed in forest land, and low concentration of potential pollutants near the intake.

No categories or facilities ranked as high risk/high release potential. High risk/medium release potential include septic tanks in the IMZ and OMZ, Dawnville Elementary and Better Backers with past permit violations, an agricultural waste lagoon with the potential for pathogens, BOD, and other materials. Medium risk/high release potential include railroad crossings and the potential for spills of large volumes of hazardous chemicals and 4 agricultural waste lagoons.

Table 1.5 illustrates the matrix of potential contaminant rankings. The EPD's source water assessment guidance was used to calculate the relative percent of occurrence of contaminants within each priority zone and the overall susceptibility. Sources listed as occurring in both the IMZ and OMZ were weighted separately for the overall susceptibility. The largest number of potential sources (68%) was ranked as low priority. Medium and high priority contaminants represent 22 and 10 percent, respectively, of the total. The overall susceptibility of the intake is rated low based on this analysis.

Table 1.5 Matrix Summary for Potential Contaminant Rankings in the Conasauga River Water Supply Watershed

Risk Potential \ Release Potential	LOW	MEDIUM	HIGH
HIGH		▪ Dawnville Elem. (IMZ) ▪ Better Backers (IMZ) ▪ Non-sewer areas (IMZ & OMZ) ▪ Ag waste pond (OMZ)	
MEDIUM	▪ Murray County Memorial Hospital (IMZ) ▪ Playfield Industries (IMZ) ▪ 2 Mines (OMZ) ▪ 3 RCRA Sites (OMZ) ▪ Forest areas (IMZ) ▪ 23 CAFOs (IMZ & OMZ) ▪ Rostex Airport (OMZ)	▪ 3 RCRA Sites (IMZ) ▪ Schering-Plough (IMZ) ▪ Milliken and Co. (OMZ) ▪ Diamond Rug (OMZ) ▪ R.H. O'Neal (OMZ) ▪ R.M. Harris Field (OMZ) ▪ Prater Mill Flight Park (IMZ) ▪ Agricultural areas (IMZ & OMZ) ▪ Urban areas (IMZ) ▪ Forest areas (OMZ) ▪ 2 Ag waste lagoons (OMZ) ▪ 9 Primary roads (IMZ & OMZ) ▪ Secondary roads, paved (IMZ)	▪ 4 Ag waste ponds (OMZ) ▪ 2 CSX Railroads (IMZ & OMZ)
LOW	▪ 2 Mines (IMZ) ▪ Urban areas (OMZ) ▪ Blue Bird Field (OMZ) ▪ Secondary roads, unpaved (IMZ) ▪ 35 CAFOs (IMZ & OMZ)	▪ 2 Mines (IMZ) ▪ Conasauga Lumber (OMZ) ▪ Secondary roads, paved (OMZ) ▪ Secondary roads, unpaved (OMZ)	

Risk Potential ↑ — Release Potential →

High Priority Contaminants:	10%
Medium Priority Contaminants:	22%
Low Priority Contaminants:	68%

SOURCE WATER ASSESSMENT SUSCEPTIBILITY RESULTS

FREEMAN SPRINGS INTAKE

The following information summarizes specific categories of potential pollutants for Freeman Springs. A complete listing of the sites included in the susceptibility analysis is provided in Appendix D.

Non-Point Source Assessment

According to EPD's guidance document, four categories of non-point source runoff are considered for the assessment of non-point sources - agriculture, forestry, non-sewer, and urban areas. Sewer areas are included within the urban area assessment.

Agriculture. Within the Freeman Springs watershed and recharge areas, agriculture factors which present medium risk to water supplies include livestock density, moderate topography, use of agricultural chemicals, and risks associated with chemicals, animals, and waste products.

Forestry. Forestry activities demonstrate low risk to the Freeman Springs water intake. Limited forestry activities are assumed to occur in the Freeman Springs watershed and recharge areas.

Urban. There are no major cities in the Freeman Springs watershed or recharge areas, thus urban runoff and sewer areas are ranked as low risk and low release potential.

Non-Sewer (Septic). Non-sewer areas present high potential risk due to the possible presence of pathogens leaching from failing systems. However, the release is tempered by transport through soil and groundwater to reach water supplies.

Point Source Assessment

Agricultural Waste Lagoons. There are no agricultural waste lagoons located in the Freeman Springs watershed.

Airports. No airports are located in the Freeman Springs watershed.

Confined Animal Feedlot Operations (CAFOs). There are no CAFOs located in the Freeman Springs watershed.

Industries, Manufacturing Facilities and Businesses. There are no industrial point sources identified within the Freeman Springs assessment area.

Landfills and Garbage Transfer Stations. No landfills are located within the Freeman Springs watershed.

Lift Stations. There are no lift stations located within the Freeman Springs watershed.

Mining. There are no mining operations located within the Freeman Springs watershed.

Roadways. There is one primary road that crosses streams within the Freeman Springs watershed – Georgia Highway 201. However, as the water intake is located on a tributary of the Creek, the road crossings upstream will not impact water quality. Each road crossing was not evaluated individually; instead the entire stretch of highway was evaluated for an overall release and risk potential.

Railways. There are no railroad stream crossings within the Freeman Springs watershed.

Pipelines. There are no gas pipeline stream crossings within the Freeman Springs watershed.

Susceptibility Results

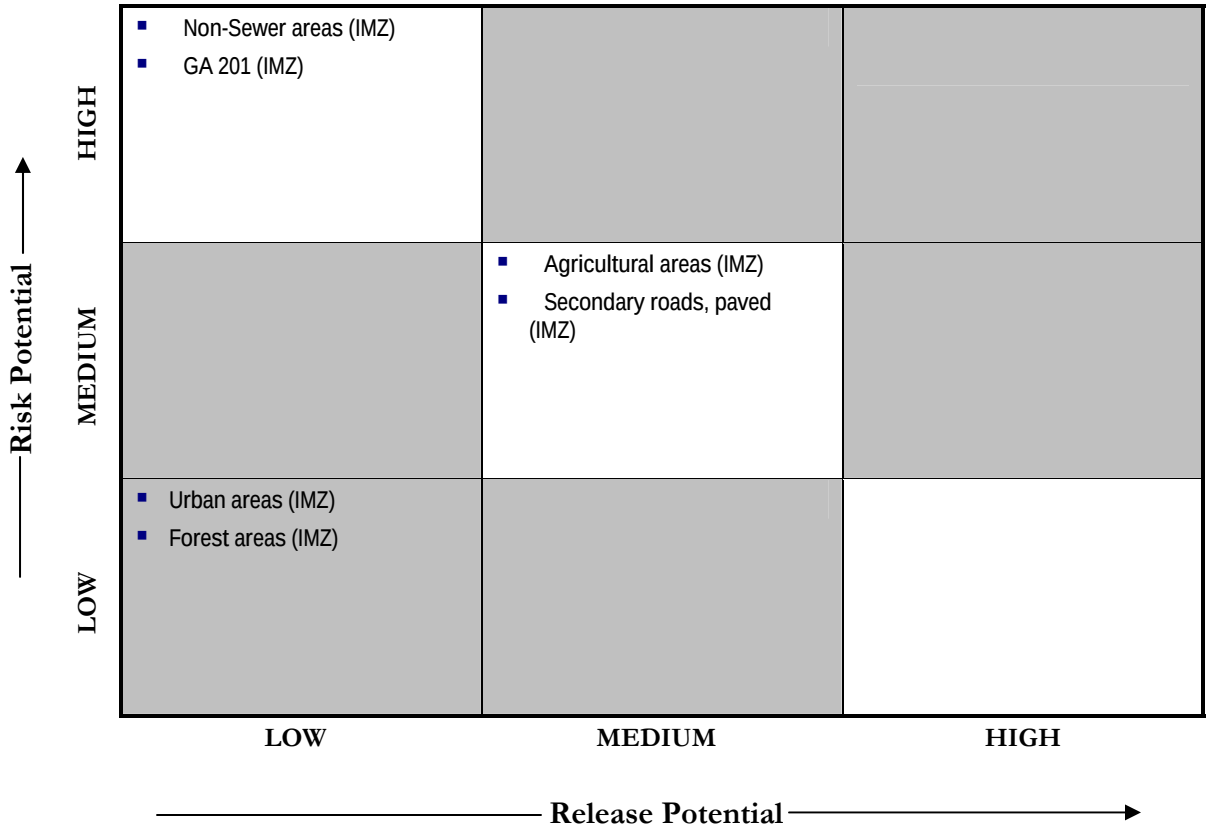
Figure 1.3 illustrates the delineation of assessment areas and gives the location of the potential pollution sources. Freeman Springs is considered groundwater under the influence of surface water. Therefore, both the recharge area and the surface water watershed were considered during the assessment. The entire surface water watershed is 7.5 square miles, which makes up the IMZ. The EPD source water assessment guidance for surface source water was used to rank individual potential pollution sources according to their potential for release and their potential risk to source water. Appendix D gives the complete inventory of contaminants along with the individual rankings for the release and risk potential along with a justification for each.

There are very few potential contaminants compared to the other, larger watersheds. In fact, no point sources were identified except road crossings. GA 201 ranks as a high risk and low release potential due to the number of road crossings, proximity to surface waters, and potential for spills. Non-sewer areas present a high risk due to the possible presence of pathogens, but a low overall release potential. Agricultural non-point source pollution ranked as a medium risk and release along with secondary paved roads. Other non-point categories including urban and forest runoff ranked low risk/low release.

Table 1.6 illustrates the matrix of potential contaminant rankings. The EPD's source water assessment guidance was used to calculate the relative percent of occurrence of contaminants within the IMZ and the overall susceptibility. Zero out of six categories (0 percent) were present in the high risk/release grids. Four out of six (67 percent) potential pollution categories represent medium priority contaminants and 2 out of six (33 percent) are considered low priority. The overall susceptibility of the intake is rated low based on the suggested guidance to use best professional judgment. Considering the extremely low number of potential contaminants located in the

watershed, very good quality, and the source of the water from a spring (less risk of contamination) this ranking is justified.

Table 1.6 Matrix Summary for Potential Contaminant Rankings in the Freeman Springs Water Supply Watershed



High Priority Contaminants:	**0 %**
Medium Priority Contaminants:	**67 %**
Low Priority Contaminants:	**33 %**

SOURCE WATER ASSESSMENT SUSCEPTIBILITY RESULTS

MILL CREEK INTAKE

The following information summarizes specific categories of potential pollutants for Mill Creek. A complete listing of the sites included in the susceptibility analysis is provided in Appendix E.

Non-Point Source Assessment

According to EPD's guidance document, four categories of non-point source runoff are considered for the assessment of non-point sources - agriculture, forestry, non-sewer, and urban areas. Sewer areas are included within the urban area assessment.

Agriculture. Within the Mill Creek watershed, agriculture factors which present medium risk to water supplies include livestock density, moderate topography, use of agricultural chemicals, and risks associated with chemicals, animals, and waste products. The overall volume of runoff from agricultural activities is considered low due to more limited activities in this watershed.

Forestry. Forestry activities demonstrate limited risk to the Mill Creek water intake.

Urban. The IMZ of Mill Creek ranks as a high risk/medium release for pollution from urban areas because it drains sections of the City of Dalton. However, it should be noted that the overall risk and release is smaller when compared to larger cities with a greater percentage of impervious surface. The OMZ is ranked low because there are no major cities in this small area.

Non-Sewer (Septic). Non-sewer areas present high potential risk due to the possible presence of pathogens leaching from failing systems. However, the release is tempered by transport through soil and groundwater to reach surface water supplies. A relatively higher population density is assumed for areas outside of Dalton's city limits, thus the release potential is considered medium.

Point Source Assessment

Agricultural Waste Lagoons. No agricultural waste lagoons are identified within the Mill Creek watershed.

Airports. No airports are located in the Mill Creek watershed.

Confined Animal Feedlot Operations (CAFOs). Upstream of the Mill Creek intake, 10 CAFOs have been identified. Assuming these are chicken houses, the risk and release factors are low to medium due to the dry nature of animal wastes and general practice of hauling litter away from the site.

Industries, Manufacturing Facilities and Businesses. Most of the industrial facilities in the Mill Creek area are clustered near the City of Dalton (Figure 1.3). Most RCRA sites are small quantity generators. The facilities included in the susceptibility analysis detailed in Appendix E are listed by management zone below:

IMZ

- American Sample Systems, Inc. (RCRA Site)
- Blue Ridge Mtn Contract Carriers (RCRA Site)
- Circle M Food Shop #10 (RCRA Site)
- Dalton College (RCRA Site)
- Rick's Texaco (RCRA Site)
- Roadtec (RCRA Site)
- Tufting Machine Co. (RCRA Site)
- US Xpress, Inc. (RCRA Site)
- Chapco South (TRI Site)
- Fibro Chem Inc. (TRI Site)
- Polychem, LTD (no longer in business) (Hazardous Waster Facility)

Most of these facilities are considered high risk/medium or low release potential. Engineering controls can mitigate release potential.

Landfills and Garbage Transfer Stations. One landfill is located within the Mill Creek watershed – Rockyface-Westside Municipal Solid Waste Landfill.

Lift Stations. There are 6 lift stations located within the Mill Creek watershed, and are maintained and operated by Dalton Utilities:

- Hollybrook Lift Station
- North Broadwick Drive Lift Station
- Windmere #1 Lift Station
- Windmere #2 Lift Station
- Windmere #5 Lift Station
- Woodsdale Lift Station

All of these stations are located within the IMZ, are smaller stations (less than 1 million gallons per day of pumping capacity) and have not experienced SSOs in the past.

Mining. One mining operation, that has been closed, is located upstream of the Mill Creek Intake. The Dalton City Quarry was a past producer of stone and is located in the Mill Creek watershed.

Roadways. The primary road crossings within the Mill Creek watershed include the following:

IMZ

- Georgia Highway 201
- Interstate 75
- U.S. Highway 41

Each road crossing was not evaluated individually; instead the entire stretch of highway within a particular management zone was evaluated for overall release and risk potential.

Railways. The CSX railroad crosses streams within the Mill Creek watershed at multiple locations within the IMZ. As with the roads, these crossings were not evaluated individually. The railroad's overall impact was assessed on a management zone basis.

Pipelines. There are multiple natural gas pipeline stream crossings within the IMZ of the Mill Creek watershed. As with road and railroad crossings, potential impacts from the entire pipeline are evaluated, rather than each individual crossing.

Susceptibility Results

Figure 1.3 illustrates the delineation of assessment areas and gives the location of the potential pollution sources. The inner management zone (IMZ) is approximately 35 square miles. The outer management zone (OMZ) encompasses only 3 square miles. The EPD source water assessment guidance for surface source water was used to rank individual potential pollution sources according to their potential for release and their potential risk to source water. Appendix E gives the complete inventory of contaminants along with the individual rankings for the release and risk potential along with a justification for each. The overall susceptibility of the intake is rated medium.

Potential contaminants that fall in the high priority zone of the susceptibility matrix include the several RCRA sites, non-sewered areas, urban areas, Interstate 75, CSX railroad tracks, the secondary paved roads, and Polychem LTD. High susceptibility is due to close proximity to both surface waters and the intake, as well as history of spills or potential for spills. There is a greater density of potential pollutant categories in the Mill Creek watershed than the other three watersheds. However, Haig Mill Reservoir can be used as a back-up off-line source should there be surface water contamination, with the ability to supply water to the plant for over 20 days.

Table 1.7 illustrates the matrix of potential contaminant rankings. The EPD's source water assessment guidance was used to calculate the relative percent of occurrence of contaminants within the IMZ and the overall susceptibility. The greatest number of potential contaminants fell within the low priority ranking, 37 percent. Medium and high priority contaminants represent 33 and 30 percent, respectively, of the total. The overall susceptibility of the intake is rated medium based on this analysis.

Table 1.7 Matrix Summary for Potential Contaminant Rankings in the Mill Creek Water Supply Watershed

Risk Potential \ Release Potential	LOW	MEDIUM	HIGH
HIGH	▪ 2 RCRA Sites (IMZ) ▪ Fibro-Chem (IMZ) ▪ 6 Lift stations (IMZ)	▪ 6 RCRA Sites (IMZ) ▪ Polychem (IMZ) ▪ Interstate 75 (IMZ) ▪ Non-Sewer areas (IMZ & OMZ) ▪ Urban areas (IMZ)	
MEDIUM	▪ Dalton City Quarry (IMZ) ▪ Agricultural areas (IMZ & OMZ) ▪ 10 CAFOs (IMZ) ▪ Chapco South (IMZ)	▪ Urban areas (OMZ) ▪ Natural gas pipeline (IMZ) ▪ 2 primary roads (IMZ) ▪ Secondary roads, paved (OMZ) ▪ Rockyface-Westside Municipal Landfill (IMZ)	▪ Secondary roads, paved (IMZ) ▪ CSX Railroad (IMZ)
LOW	▪ Forest areas (IMZ & OMZ)		

High Priority Contaminants:	30%
Medium Priority Contaminants:	33%
Low Priority Contaminants:	37%

Summary and Recommendations

Dalton Utilities is fortunate to have a large, high-quality supply of water for drinking and industrial uses. The susceptibility of the water supply to various point and non-point sources was evaluated using the EPD source water methodology that attempts to balance risk and release potential. Specific categories or sites of high risk are outlined below. In addition, engineering controls such as raw water storage facilities that provide an off-source back-up should a spill or contamination reach the drinking water sources are considered when evaluating overall susceptibility.

The overall susceptibility of three of Dalton Utilities' intakes was low, while Mill Creek ranked as medium susceptibility.

The risk to drinking water supplies generally can be grouped into three categories:

- small on-site wastewater treatment facilities that have had permit violations,
- roads/railway lines, industrial facilities with large volumes of chemical storage, lift stations, or agricultural waste lagoons that have a potential for spills, and
- non-point source pollution from urban areas, septic tanks, and agriculture run-off.

In all cases, closer proximity to the intake raises the susceptibility ranking. It is important to remember that ranking a facility, as a high risk does not reflect on management but rather a potential for contamination that can be addressed through preventative planning. In addition, facilities that store large volumes of chemicals should have secondary containment on site, which mitigates release potential.

When developing source water protection plans, different management approaches can be applied for each group. For example, chronic permit violations from small wastewater treatment facilities such as Whispering Pines mobile home park in the Coahulla Creek watershed can be addressed through coordination with regulatory officials to ensure compliance and/or exploring funding for upgrades.

The relatively high risk ranking of railroad/road crossings and industrial facilities that store large volumes of chemicals present an opportunity to ensure emergency response plans are up to date. Given the large industrial and manufacturing base in the area, transportation corridors have larger than average volumes of potential pollutants at risk for spills at any one time. Emergency response plans should include time of transport from bridge crossings to drinking water supply intakes. Details of an emergency response plan could include contact names and numbers, a list of emergency response officials, laboratory personnel and analytical capabilities, among others. Dalton Utilities has a good history of emergency coordination with local fire and police departments.

Non-point source pollution can be addressed through a variety of methods including education and outreach programs, implementation of urban runoff controls such as street sweeping and storm sewer inspections, enforcement of stream buffer requirements for small source water watersheds, and other programs targeted at each category of land use.

Public outreach can be a powerful tool in delivering a message about prevention and encouraging buy-in for protection programs. There are two public outreach recommendations: 1) present a summary of results to community groups, with the emphasis on prevention and who to contact in case of spills and 2) distribute a flyer to businesses in the drinking water supply watersheds (IMZ) with a map of the watershed and with information on who to contact in case of a spill, good housekeeping information, etc.

POTENTIAL POINT POLLUTANT SOURCES

CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act. Commonly referred to as Superfund, CERCLA was enacted on December 11, 1980. CERCLA provides EPA authority to respond to releases or threatened releases of hazardous substances, pollutants, or contaminants that may endanger human health or the environment. EPA follows the procedures outlined in the National Contingency Plan (NCP) to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. CERCLA also requires that EPA maintain the National Priorities List (NPL), a list of sites across the United States that require remedial action due to releases or threatened releases of hazardous substances. Finally, CERCLA requires reporting of releases, establishes the liability of persons responsible for releases of hazardous substances, and established a trust fund to provide for cleanup when no responsible party can be identified

Source: EPA web site. http://www.epa.gov/epaoswer/hotline/hotintro.htm#cercla

RCRIS = Resource Conservation and Recovery Information System. National program management and inventory system of RCRA hazardous waste handlers and is used by the EPA to support its implementation of RCRA (Resource Conservation and Recovery Act), as amended by the Hazardous and Solid Waste Amendments of 1984 (HWSA). The system is primarily used to track a handler's permit or closure status, compliance with Federal and State regulations, cleanup activities, waste handler inventory, and environmental program progress assessment. Handlers can be characterized as fitting one or more of the following categories: treatment, storage, and disposal facilities (TSDFs), large quantity generators, small quantity generators, and transporters.

Definitions for large and small quantity generators are given below:

LARGE QUANTITY GENERATORS = Generators who create more than 1,000 kg/mo of hazardous waste. Such generators are required to follow a long list of steps, including preparation of biennial reports, and procedures for handling hazardous waste.

SMALL QUANTITY GENERATORS = Persons or enterprises that produce more than 100 kg/mo but less than 1,000 kg/mo (220 - 2200 pounds per month) of hazardous waste; are required to keep more records than conditionally exempt generators. These include automotive shops, dry cleaners, photographic developers and a host of other small businesses.

Source: Fono, Andrew L. and Olga L. Moya Federal environmental Law, The User's guide. West Publishing Co. St Paul, Minnesota. 1997

IFD = Industrial Facility Discharge. These sites are industrial or municipal point sources discharging to surface waters. The IFD was designed and implemented in late 1970s under a contract for the specific purpose of providing the Monitoring and Data Support Division (MDSD) of the Office of Water Regulations and Standards with a comprehensive database of industrial point source dischargers to surface water in the United States. The major components of the IFD are the Permit Compliance System (PCS), the National Pollution Discharge Elimination System (NPDES), the Construction Grants Needs Survey, the Publicly Owned Treatment Works Study, the regulations and standards from EPA/OW Effluent Guidelines Division, EPA's Duluth Laboratory's Complex Effluent Toxicity Information System (CETIS) database, the Organic Chemical Producer's (OCP) database, EPA Enforcement Form 2C data in STORET, the Hazardous Waste National Priority List (NPL) sites, the Reach File, the In-House System (IHS) Stream Gage File, and input from EPA Region and State applications. General Information about each facility was first extracted from the PCS to form the building block upon which more information was added. The IFD is organized as a hierarchial information system of three levels: facility, discharge pipe, and contributing indirect discharge. The facility level contains identification information and summarized discharge data. The discharge level includes the components of each individual discharge such as location of pipe, flow, and SIC code activity. Indirect discharge level includes data on industrial flow from industries that discharge to another facility such as a Publicly Owned Treatment Works (POTW), rather than directly to surface water.

Appendix A. Definitions of Federal and State Potential Pollution Source Classifications

POTENTIAL POINT POLLUTANT SOURCES
TRI = Toxic Release Inventory. EPA requires annual reportrs of toxic chemical releases to the environment under section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). These reports are submitted on EPA Form R, the Toxic Relase Reporting Form. The reports are required to provide the public with information on the releases of listed toxic chemicals in their communities and to provide EPA with release information to assist the Agency in determining the need for future regulations. Facilities must report the quantities of both routine and accidental releases of toxic chemicals, as well as the maximum amount of the listed toxic chemical on-site during the calendar year and the amount in wastes transferred off-site. Reports must be files by owners and operators of facilities which meet all of the following criteria: 10 or more full-time employees (part-time equivalent), Facility is included in Standard Industrial Classification (SIC) 20 though 19, Manufacturers or processes more than 25,000 lbs. or uses more than 10,000 lbs. of any listed chemical during the calendar year. Source: EPA web site. http://www.epa.gov/region07/programs/artd/toxics/triwhat.html
HSI = Hazardous Site Inventory. The Georgia Environmental Protection Division (EPD) has published the Hazardous Site Inventory (HSI) since July 1, 1994. The HSI is a list of sites where releases of regulated substances have occurred that are deemed to be reportable by the Rules for Hazardous Site Response, Chapter 391-3-19 (Rules). The Rules require persons who have had a release exceeding specified thresholds to complete a Release Notification/Reporting Form and send it to EPD. This information is then evaluated by EPD in terms of both the nature of the release and the proximity of human and environmental receptors. If this evaluation demonstrates that a potential threat to human health or the environment exists, the site is listed on the HSI. Source: Georgia EPD web site. http://www.ganet.org/dnr/environ/rules_files/exist_files/391-3-19.pdf

POTENTIAL POINT POLLUTANT SOURCES		
COAHULLA CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
NPDES Permit Holders: Vulcan Materials Rock Quarry 585 Cherokee Estate Road Dalton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – since 1996, have had zero discharge, due to settling ponds; prior to this consistently met permit conditions **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – mined for stone, therefore inert runoff with suspended solids **(low)** Overall Risk Potential = LOW
NPDES Permit Holders: Whispering Pines MHP 100 Bay Drive Dalton, Georgia	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – chronic permit violations for BOD and poor inspection records **(high)** Overall Release Potential = HIGH	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – acute pathogens/fecal coliform **(high)** Overall Risk Potential = HIGH
Mining: Cooper Pit Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – on-going small releases of stormwater runoff from site **(medium)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – mine for stone, therefore inert runoff with suspended solids **(low)** Overall Risk Potential = LOW

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POTENTIAL POINT POLLUTANT SOURCES		
COAHULLA CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Mining: County Quarry (Past Producer) Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – "past producer", therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – mined for stone, therefore inert runoff with suspended solids **(low)** Overall Risk Potential = LOW
RCRA Sites: Joy Truck Lines 119 Maresca Dr. NE Dalton, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – fuels and chemicals stored on site **(medium)** Overall Risk Potential = MEDIUM
Lift Stations: Amberfield Lift Station Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – less than 1000 gallons, due to secondary containment procedures such as automatic dialers in the case of a spill. **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** ▪ Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – acute pathogens/fecal coliform **(high)** Overall Risk Potential = HIGH
Lift Stations: Classic Estates Lift Station Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – less than 1000 gallons, due to secondary containment procedures such as automatic dialers in the case of a spill. **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – acute pathogens/fecal coliform **(high)** Overall Risk Potential = HIGH

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POTENTIAL POINT POLLUTANT SOURCES		
COAHULLA CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Secondary roads, paved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings (53) within 7 miles of intake (**medium**) ▪ Volume of release – estimated 1,000 – 10,000 gallons potential from tractor-trailer w/small receiving streams/tributaries **(medium)** ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chronic, chemicals from transport trucks (**medium)** Overall Risk Potential = MEDIUM
Primary Road Crossing Georgia Highway 71	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 5 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM
Natural Gas Line Crossing NATURAL GAS PIPELINES	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 15 ▪ Volume of Release - Little likelihood of release, no reported releases **(low)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(high)** ▪ Toxicity - Chronic, chemicals, but rapid loss due to volatilization **(low)** Overall Risk Potential = MEDIUM

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COAHULLA CREEK – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
NPDES Permit Holders: Varnell Elementary School 3900 Cleveland Road Dalton, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** ▪ Supplemental Guidance for Regulated Sources – last permit violation was in November 1997 for fecal coliform **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – acute pathogens, fecal coliform **(high)** Overall Risk Potential = HIGH
NPDES Permit Holders (CAFOS): J&S Poultry Farm 1905 Strawhill Road SE Cleveland, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – on-going small releases of stormwater runoff from site **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – dry poultry litter, fecal coliform **(medium)** Overall Risk Potential = LOW
NPDES Permit Holders (CAFOS): Tylan Davis Property 1762 Strawhill Road SE Cleveland, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – on-going small releases of stormwater runoff from site **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – animal waste **(medium)** Overall Risk Potential = LOW

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COAHULLA CREEK – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Industrial Facility Discharges / TRI: ConAgra Poultry Hatchery 5000 Cohutta Varnell Road Varnell, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – based on Tier II data provided by EPD, greater than 10,000 gallons of chemicals stored on site **(high)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – diesel fuel storage on site **(medium)** Overall Risk Potential = MEDIUM
Mining: Cohutta Number Two (Past Producer) Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – "past producer", therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – mined for Manganese, therefore inert runoff with suspended solids and Manganese **(low)** Overall Risk Potential = LOW
Mining: Lanski Property – Talc Industries Inc. Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – on-going small releases of stormwater runoff from site **(medium)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – mined for Manganese, therefore inert runoff with suspended solids and Manganese **(low)** Overall Risk Potential = LOW
Garbage Transfer Stations: Dalton-McGaughey Chapel Transfer Station 819 McGaughey Chapel Road Cohutta, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – less than 1000 gallons **(low)** ▪ Duration of release – little likelihood of a release – most discharge associated with stormwater and leakage from vehicles **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – inert wastes and some chemicals in household solid wastes **(medium)** Overall Risk Potential = MEDIUM

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COAHULLA CREEK – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Secondary roads, paved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings (220) within 7 – 20 miles of intake (**high**) ▪ Volume of release – estimated 1,000 – 10,000 gallons potential from tractor-trailer w/small receiving streams/tributaries **(medium)** ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = LOW	▪ 140 road crossings within 7 – 15 miles upstream of intake; 80 road crossings 15-20 miles upstream of intake. **(high)** ▪ Toxicity – chronic, chemicals from transport trucks (**medium)** Overall Risk Potential = MEDIUM
Secondary roads, unpaved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings (7) within 7 –20 miles of intake (**low**) ▪ Volume of release – < 1000 gallons potential to small to large receiving streams/tributaries (**low**) ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = LOW	▪ 2 road crossings within 7 – 15 miles upstream of intake; 5 road crossings 15-20 miles upstream of intake. **(low)** ▪ No large transport trucks, low toxicity (**low)** Overall Risk Potential = LOW
Primary Road Crossing Georgia Highway 2	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 5 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM

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COAHULLA CREEK – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Primary Road Crossing Georgia Highway 71	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 9 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(low)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM
Primary Road Crossing Tennessee Highway 60	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 13 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(low)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM
Railroad Crossing NORFOLK SOUTHERN	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 27 ▪ Volume of Release - High likelihood of one-time unanticipated release, catastrophic event **(high)** ▪ Duration of Release - High likelihood of one-time unanticipated release, catastrophic event **(high)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = HIGH	▪ Average distance risk rating from surface water intake - **(low)** ▪ Toxicity - Acute, possible pathogens **(high)** Overall Risk Potential = MEDIUM

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COAHULLA CREEK – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Natural Gas Line Crossing NATURAL GAS PIPELINES	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 2 ▪ Volume of Release - Little likelihood of release, no reported releases **(low)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chronic, chemicals, but rapid loss due to volatilization **(low)** Overall Risk Potential = MEDIUM

COAHULLA CREEK – NMZ (NON-MANAGEMENT ZONE)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
NPDES Permit Holders (Industrial Stormwater): Ballard's Auto Parts 2199 Waterlevel Highway Cleveland, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – permitted for industrial stormwater discharge, therefore less than 1000 gallons **(low)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – sediment from stormwater runoff **(low)** Overall Risk Potential = LOW
NPDES Permit Holders (Industrial Stormwater): Ballard Truck Parts 210 Old Power Line Road Cleveland, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – permitted for industrial stormwater discharge, therefore less than 1000 gallons **(low)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – sediment from stormwater runoff **(low)** Overall Risk Potential = LOW

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COAHULLA CREEK – NMZ (NON-MANAGEMENT ZONE)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
NPDES Permit Holders (Industrial Stormwater): Central Asphalt, Inc. 348 Ladd Springs Road SE Cleveland, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – permitted for industrial stormwater discharge, therefore less than 1000 gallons **(low)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – sediment from stormwater runoff **(low)** Overall Risk Potential = LOW
NPDES Permit Holders (Industrial Stormwater): J.L. Chanley Truck Rental 3501 Waterlevel Highway SE Cleveland, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – permitted for industrial stormwater discharge, therefore less than 1000 gallons **(low)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – sediment from stormwater runoff **(low)** Overall Risk Potential = LOW
NPDES Permit Holders (Industrial Stormwater): Simpson Construction Company 178 Durkee Road Cleveland, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – permitted for industrial stormwater discharge, therefore less than 1000 gallons **(low)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – sediment from stormwater runoff **(low)** Overall Risk Potential = LOW

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COAHULLA CREEK – NMZ (NON-MANAGEMENT ZONE)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
NPDES Permit Holders (Industrial Stormwater): Southeastern Materials 381 Ladd Springs Road SE Cleveland, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – permitted for industrial stormwater discharge, therefore less than 1000 gallons **(low)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – sediment from stormwater runoff **(low)** Overall Risk Potential = LOW
NPDES Permit Holders (Industrial Stormwater): Wampler's Used Auto Parts 2435 Bates Pike Cleveland, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – permitted for industrial stormwater discharge, therefore less than 1000 gallons **(low)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – sediment from stormwater runoff **(low)** Overall Risk Potential = LOW

POTENTIAL NON-POINT POLLUTANT SOURCES		
COAHULLA CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Nonpoint Source: AGRICULTURAL AREAS	Using supplemental guidance for Non-point Sources: ▪ Medium livestock density **(medium)** ▪ Moderate topography **(medium)** ▪ Adequate buffers along creek **(low)** ▪ Moderate use of agricultural chemicals **(medium)** ▪ Adequate use of BMPs **(low)** Overall Release Potential = MEDIUM	Using supplemental guidance for Non-point Sources: ▪ Agricultural areas located throughout watershed **(medium)** ▪ Moderate volume and medium risk of toxicity from agricultural chemicals, animals and wastes **(medium)** Overall Risk Potential = MEDIUM

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POTENTIAL NON-POINT POLLUTANT SOURCES		
COAHULLA CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Nonpoint Source: URBAN AREAS	Using supplemental guidance for Non-point Sources: ▪ Moderate percentage of impervious surface **(medium)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(medium)** ▪ Urban area within 7 miles of the intake **(high)** Overall Release Potential = MEDIUM	Using supplemental guidance for Non-point Sources: ▪ Surface water in close proximity to urban area **(medium)** ▪ Moderate volume and toxicity of urban runoff **(medium)** Overall Risk Potential = MEDIUM
Nonpoint Source: NON-SEWER (SEPTIC) AREAS	▪ Distance from surface water - within 500 feet **(high)** ▪ Volume of release – small percentage of septic systems assumed failing at any one time **(medium)** ▪ Duration of release - little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport - travel primarily through soil or groundwater **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water - within 7 miles **(high)** ▪ Toxicity - acute, pathogens from leaching of septic waste **(high)** Overall Risk Potential = HIGH
Nonpoint Source: FOREST AREAS	▪ Low density of forestry activities **(low)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(low)** ▪ BMPs in place **(low)** Overall Release Potential = LOW	▪ Forestry activities near stream **(medium)** ▪ Low toxicity **(low)** Overall Risk Potential = LOW

COAHULLA CREEK – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Nonpoint Source: AGRICULTURAL AREAS	Using supplemental guidance for Non-point Sources: ▪ Medium livestock density **(medium)** ▪ Moderate topography **(medium)** ▪ Adequate buffers along creek **(low)** ▪ Moderate use of agricultural chemicals **(medium)** ▪ Adequate use of BMPs **(low)** Overall Release Potential = MEDIUM	Using supplemental guidance for Non-point Sources: ▪ Agricultural areas located throughout watershed **(medium)** ▪ Moderate volume and medium risk of toxicity from agricultural chemicals, animals and wastes **(medium)** Overall Risk Potential = MEDIUM

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COAHULLA CREEK – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Nonpoint Source: URBAN AREAS	Using supplemental guidance for Non-point Sources: ▪ Low percentage of impervious surface **(low)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(low)** ▪ No urban area within 7 miles of the intake **(low)** Overall Release Potential = LOW	Using supplemental guidance for Non-point Sources: ▪ Surface water not in close proximity to urban area **(low)** ▪ Low volume and toxicity of urban runoff **(low)** Overall Risk Potential = LOW
Nonpoint Source: NON-SEWER (SEPTIC) AREAS	▪ Distance from surface water - within 500 feet **(high)** ▪ Volume of release – small percentage of septic systems assumed failing at any one time, low population density **(low)** ▪ Duration of release - little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport - travel primarily through soil or groundwater **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – located throughout watershed **(medium)** ▪ Toxicity - acute, pathogens from leaching of septic waste **(high)** Overall Risk Potential = HIGH
Nonpoint Source: FOREST AREAS	▪ Moderate density of forestry activities **(medium)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(low)** ▪ BMPs in place **(low)** Overall Release Potential = MEDIUM	▪ Forestry activities located near streams **(medium)** ▪ Low toxicity **(low)** Overall Risk Potential = LOW

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POTENTIAL POINT POLLUTANT SOURCES		
CONASAUGA RIVER – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
NPDES Permit Holders: Dawnville Elementary School 1380 Dawnville Rd. NE Dalton, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** ▪ Supplemental Guidance for Regulated Sources – periodic permit violations, with last one occurring in February 1997 for fecal coliform **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – permitted for fecal coliform **(high)** Overall Risk Potential = HIGH
Industrial Facility Discharges: Playfield Industry – Mill C Murray Industrial Blvd. Chatsworth, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – miscellaneous chemicals stored and used on site **(medium)** Overall Risk Potential = MEDIUM
Mining: C.C. Keith Property (Past Producer) Murray County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – "past producer", therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – mined for Barite, therefore inert runoff with suspended solids **(low)** Overall Risk Potential = LOW
Mining: George Cline Property (Past Producer) Whitfield County, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – "past producer", therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – mined for Barite, therefore inert runoff with suspended solids **(low)** Overall Risk Potential = LOW

POTENTIAL POINT POLLUTANT SOURCES		
CONASAUGA RIVER – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Mining: Hayes Rock Mine (Past Producer) Murray County, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – "past producer", therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – mined for stone, therefore inert runoff with suspended solids **(low)** Overall Risk Potential = LOW
Mining: Southern Talc Slate Pit (Past Producer) Murray County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – "past producer", therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – mined for stone, therefore inert runoff with suspended solids **(low)** Overall Risk Potential = LOW
RCRA Sites: Better Backers Inc. 1650 Highway 76 Chatsworth, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – based on Tier II data provided by EPD, greater than 10,000 gallons of chemicals stored on site **(high)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chemicals stored on site **(medium)** Overall Risk Potential = HIGH
RCRA / TRI Sites: Galaxy Carpet Mills, Inc. – Chatsworth Facility 800 Industrial Blvd. Chatsworth, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – conditionally exempt, small quantity generator – based on Tier II data provided by EPD, between 1000 and 10,000 gallons of chemicals stored on site **(medium)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – chemicals stored on site **(medium)** Overall Risk Potential = MEDIUM

POTENTIAL POINT POLLUTANT SOURCES		
CONASAUGA RIVER – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
RCRA Sites: Mohawk Industries, Inc. 235 Industrial Blvd. Chatsworth, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – based on Tier II data provided by EPD, greater than 10,000 gallons of chemicals stored on site **(high)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – inorganic acids, chlorine, surfactants stored on site **(medium)** Overall Risk Potential = MEDIUM
RCRA Sites: Murray County Memorial Hospital 707 Old Ellijay Rd. Chatsworth, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – chemicals stored on site **(medium)** Overall Risk Potential = MEDIUM
RCRA Sites: Shaw Industries Inc., Plant 84 109 Industrial Blvd. Chatsworth, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – Small quantity generator – based on Tier II data provided by EPD, approximately 65,000 gallons of fuel oil stored on site **(high)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – fuel oil stored on site **(medium)** Overall Risk Potential = MEDIUM
TRI: Schering-Plough Healthcare Prods. 1929 Duvall Road Chatsworth, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – based on Tier II data provided by EPD, greater than 10,000 gallons of chemicals stored on site **(high)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – Zinc compounds and other chemicals stored on site in large quantities **(medium)** Overall Risk Potential = MEDIUM

POTENTIAL POINT POLLUTANT SOURCES		
CONASAUGA RIVER – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Airports: Prater Mill Flight Park Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – bulk flammable aviation storage on site **(medium)** Overall Risk Potential = MEDIUM
Secondary roads, paved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings (18) within 7 miles of intake **(low)** ▪ Volume of release – estimated 1,000 – 10,000 gallons potential from tractor-trailer w/small receiving streams/tributaries **(medium)** ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chronic, chemicals from transport trucks (**medium)** Overall Risk Potential = MEDIUM
Secondary roads, unpaved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings (1) within 7 miles of intake **(low)** ▪ Volume of release – < 1000 gallons potential to small to large receiving streams/tributaries (**low**) ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ No large transport trucks, low toxicity (**low)** Overall Risk Potential = LOW

POTENTIAL POINT POLLUTANT SOURCES		
CONASAUGA RIVER – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Primary Road Crossing Georgia Highway 225	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Stream crossings - 4 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM
Primary Road Crossing Georgia Highway 286	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Stream crossings - 10 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM
Primary Road Crossing US HWY 411	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Stream crossings - 2 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM

POTENTIAL POINT POLLUTANT SOURCES		
CONASAUGA RIVER – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Primary Road Crossing US HWY 76	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Stream crossings - 2 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM
Railroad Crossing CSX	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of stream crossings – 2 **(low)** ▪ Volume of Release - High likelihood of one-time unanticipated release, catastrophic event **(high)** ▪ Duration of Release – no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = HIGH	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chemicals from tanker cars **(medium)** Overall Risk Potential = MEDIUM

CONASAUGA RIVER – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
NPDES Permit Holders: Milliken and Co. (Design CN.) (aka Cohutta Springs Conference Center) 1175 Cohutta Springs Rd. Crandall, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** ▪ Supplemental Guidance for Regulated Sources – Records unavailable at EPD to assess permit violations Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – permitted for BOD, TSS, and fecal coliform **(high)** Overall Risk Potential = MEDIUM

CONASAUGA RIVER – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
NPDES Permit Holders (Industrial Stormwater): Conasauga River Lumber Co. Delta Drive Conasauga, TN	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – permitted for industrial stormwater discharge, therefore less than 1000 gallons **(low)** ▪ Duration of release – NPDES permit, therefore on-going, permitted releases **(medium)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** ▪ Supplemental Guidance for Regulated Sources – **low** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – sediment from stormwater runoff **(low)** Overall Risk Potential = LOW
Hazardous Waste Facilities/RCRA Sites: Diamond Rug and Carpet Mills – Eton Plant 4140 North Highway 411 Eton, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – Small quantity generator – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – Based on HIS, the site has a known release of tetracholoroethene into groundwater - no HSRA cleanup or investigation required **(medium)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – chemicals including benzene and tetrachoroethene in groundwater **(medium)** Overall Risk Potential = MEDIUM
Mining: C.C. and J.H. Keith Property (Past Producer) Murray County, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – “past producer”, therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – mined for iron, therefore runoff may contain suspended solids, iron, low pH **(medium)** Overall Risk Potential = MEDIUM
Mining: J.K. Keith Property (Past Producer) Murray County, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – “past producer”, therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – mined for iron, therefore runoff may contain suspended solids, iron, low pH **(medium)** Overall Risk Potential = MEDIUM

CONASAUGA RIVER – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Mining: R.H. O'Neal Property (Past Producer) Murray County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – "past producer", therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – mined for iron, therefore runoff may contain suspended solids, iron, low pH **(medium)** Overall Risk Potential = MEDIUM
RCRA Sites: ACS Fibers 365 Industrail Blvd. Eton, GA *BC_2005*	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release –Small quantity generator – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – miscellaneous chemicals stored on site and hazardous waste generator **(medium)** Overall Risk Potential = MEDIUM
RCRA Sites: Browning Mfg. Division Old Federal Rd. Eton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – miscellaneous chemicals stored on site and hazardous waste site **(medium)** Overall Risk Potential = MEDIUM
RCRA Sites: D&W Carpet & Rug Co., Inc. 3620 U.S. Hwy 411 North Eton, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – Small quantity generator – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – miscellaneous chemicals stored on site **(medium)** Overall Risk Potential = MEDIUM
Airports: Rostex Airport Murray County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – bulk flammable aviation storage on site **(medium)** Overall Risk Potential = LOW

CONASAUGA RIVER – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Airports: Blue Bird Field Murray County, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – between 15 and 20 miles **(low)** ▪ Toxicity – bulk flammable aviation storage on site **(medium)** Overall Risk Potential = LOW
Airports: R.M. Harris Field Murray County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – bulk flammable aviation storage on site **(medium)** Overall Risk Potential = MEDIUM
Secondary roads, paved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings (85) within 7 –20 miles of intake (**medium**) ▪ Volume of release – estimated 1,000 – 10,000 gallons potential from tractor-trailer w/small receiving streams/tributaries **(medium)** ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = MEDIUM	▪ 10 road crossings within 7 – 15 miles upstream of intake; 75 road crossings 15-20 miles upstream of intake. **(low)** ▪ Toxicity – chronic, chemicals from transport trucks (**medium)** Overall Risk Potential = LOW
Secondary roads, unpaved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings (50) within 7 –20 miles of intake (**medium**) ▪ Volume of release – < 1000 gallons potential to small to large receiving streams/tributaries (**low**) ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = MEDIUM	▪ 15 road crossings within 7 – 15 miles upstream of intake; 35 road crossings 15-20 miles upstream of intake. **(low)** ▪ No large transport trucks, low toxicity (**low)** Overall Risk Potential = LOW

CONASAUGA RIVER – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Primary Road Crossing Georgia Highway 2	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Stream crossings - 10 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential - MEDIUM	▪ Average distance risk rating from surface water intake - **(low)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential - MEDIUM
Primary Road Crossing Georgia Highway 225	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Stream crossings - 5 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential - MEDIUM	▪ Average distance risk rating from surface water intake - **(low)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential - MEDIUM
Primary Road Crossing Tennessee Highway 313	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Stream crossings - 2 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential - MEDIUM	▪ Average distance risk rating from surface water intake - **(low)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential - MEDIUM

CONASAUGA RIVER – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Primary Road Crossing Tennessee Highway 74	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Stream crossings - 4 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential - MEDIUM	▪ Average distance risk rating from surface water intake - **(low)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential - MEDIUM
Primary Road Crossing US HWY 411	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Stream crossings - 22 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential - MEDIUM	▪ Average distance risk rating from surface water intake - **(low)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential - MEDIUM
Railroad Crossing CSX	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of stream crossings – 19 **(high)** ▪ Volume of Release - High likelihood of one-time unanticipated release, catastrophic event **(high)** ▪ Duration of Release - High likelihood of one-time unanticipated release, catastrophic event **(high)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential - HIGH	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chemicals from tanker cars **(medium)** Overall Risk Potential - MEDIUM

POTENTIAL NON-POINT POLLUTANT SOURCES		
CONASAUGA RIVER – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Nonpoint Source: AGRICULTURAL AREAS	Using supplemental guidance for Non-point Sources: ▪ Medium livestock density **(medium)** ▪ Moderate topography **(medium)** ▪ Adequate buffers along creek **(low)** ▪ Moderate use of agricultural chemicals **(medium)** ▪ Adequate use of BMPs **(low)** Overall Release Potential = MEDIUM	Using supplemental guidance for Non-point Sources: ▪ Agricultural areas located throughout watershed **(medium)** ▪ Moderate volume and medium risk of toxicity from agricultural chemicals, animals and wastes **(medium)** Overall Risk Potential = MEDIUM
Nonpoint Source: URBAN AREAS	Using supplemental guidance for Non-point Sources: ▪ Moderate percentage of impervious surface **(medium)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(medium)** ▪ Urban area within 7 miles of the intake **(high)** Overall Release Potential = MEDIUM	Using supplemental guidance for Non-point Sources: ▪ Surface water in close proximity to urban area **(medium)** ▪ Moderate volume and toxicity of urban runoff **(medium)** Overall Risk Potential = MEDIUM
Nonpoint Source: NON-SEWER (SEPTIC) AREAS	▪ Distance from surface water - within 500 feet **(high)** ▪ Volume of release – small percentage of septic systems assumed failing at any one time **(medium)** ▪ Duration of release - little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport - travel primarily through soil or groundwater **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water - within 7 miles **(high)** ▪ Toxicity - acute, pathogens from leaching of septic waste **(high)** Overall Risk Potential = HIGH
Nonpoint Source: FOREST AREAS	▪ Low density of forestry activities **(low)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(low)** ▪ BMPs in place **(low)** Overall Release Potential = LOW	▪ Forestry activities near streams **(medium)** ▪ Low toxicity **(low)** Overall Risk Potential = MEDIUM

CONASAUGA RIVER – OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Nonpoint Source: AGRICULTURAL AREAS	Using supplemental guidance for Non-point Sources: ▪ Medium livestock density **(medium)** ▪ Moderate topography **(medium)** ▪ Adequate buffers along creek **(low)** ▪ Moderate use of agricultural chemicals **(medium)** ▪ Adequate use of BMPs **(low)** Overall Release Potential = MEDIUM	Using supplemental guidance for Non-point Sources: ▪ Agricultural areas located throughout watershed **(medium)** ▪ Moderate volume and medium risk of toxicity from agricultural chemicals, animals and wastes **(medium)** Overall Risk Potential = MEDIUM
Nonpoint Source: URBAN AREAS	Using supplemental guidance for Non-point Sources: ▪ Low percentage of impervious surface **(low)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(low)** ▪ No urban area within 7 miles of the intake **(low)** Overall Release Potential = LOW	Using supplemental guidance for Non-point Sources: ▪ Surface water not in close proximity to urban area **(low)** ▪ Low volume and toxicity of urban runoff **(low)** Overall Risk Potential = LOW
Nonpoint Source: NON-SEWER (SEPTIC) AREAS	▪ Distance from surface water - within 500 feet **(high)** ▪ Volume of release – small percentage of septic systems assumed failing at any one time **(medium)** ▪ Duration of release - little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport - travel primarily through soil or groundwater **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water - within 7 miles **(high)** ▪ Toxicity - acute, pathogens from leaching of septic waste **(high)** Overall Risk Potential = HIGH
Nonpoint Source: FOREST AREAS	▪ Moderate density of forestry activities **(medium)** ▪ Hilly topography **(high)** ▪ Adequate buffers **(low)** ▪ BMPs in place **(medium)** Overall Release Potential = MEDIUM	▪ Forestry activities located near stream **(medium)** ▪ Low toxicity **(low)** Overall Risk Potential = MEDIUM

POTENTIAL POINT POLLUTANT SOURCES		
FREEMAN SPRINGS – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Secondary roads, paved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings (42) within 7 miles of intake (**low**) ▪ Volume of release – estimated 1,000 – 10,000 gallons potential from tractor-trailer w/small receiving streams/tributaries **(medium)** ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chronic, chemicals from transport trucks (**medium)** Overall Risk Potential = MEDIUM
Primary Road Crossing Georgia Highway 201	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 9 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = LOW	▪ Average distance risk rating from surface water intake - **(high)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = HIGH

POTENTIAL NON-POINT POLLUTANT SOURCES		
FREEMAN SPRINGS – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Nonpoint Source: AGRICULTURAL AREAS	Using supplemental guidance for Non-point Sources: Recharge Area: ▪ Moderate livestock density **(medium)** ▪ Adequate buffers immediately surrounding the spring **(low)** ▪ Moderate use of agricultural chemicals **(medium)** ▪ Adequate BMPs **(low)** Surface Water Watershed: ▪ Moderate livestock density **(medium)** ▪ Adequate buffers along creek **(low)** ▪ Moderate use of agricultural chemicals **(medium)** ▪ Adequate BMPs **(low)** Overall Release Potential = MEDIUM	Using supplemental guidance for Non-point Sources: Recharge Area: ▪ Agricultural areas located throughout recharge area **(medium)** ▪ Moderate volume and medium risk of toxicity from agricultural chemicals, animals and wastes **(medium)** Surface Water Watershed: ▪ Agricultural areas located throughout watershed **(medium)** ▪ Moderate volume and medium risk of toxicity from agricultural chemicals, animals and wastes **(medium)** Overall Risk Potential = MEDIUM
Nonpoint Source: URBAN AREAS	Using supplemental guidance for Non-point Sources: Recharge Area: ▪ Low overall percentage of impervious surface **(low)** ▪ Moderate topography **(medium)** ▪ Good buffers in place near spring **(low)** ▪ No major urban areas within 7 miles of the intake **(low)** Surface Water Watershed: ▪ Low overall percentage of impervious surface **(low)** ▪ Moderate topography **(medium)** ▪ Good buffers in place along creek **(low)** ▪ No major urban areas within 7 miles of the intake **(low)** Overall Release Potential = LOW	Using supplemental guidance for Non-point Sources: Recharge Area: ▪ No wellhead in close proximity to urban area **(low)** ▪ Low/little volume and toxicity of urban runoff **(low)** Surface Water Watershed: ▪ No surface water in close proximity to urban area **(low)** ▪ Low/little volume and toxicity of urban runoff **(low)** Overall Risk Potential = LOW

POTENTIAL NON-POINT POLLUTANT SOURCES		
FREEMAN SPRINGS – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Nonpoint Source: NON-SEWER (SEPTIC) AREAS	Recharge Area: ▪ Distance to groundwater – within 500 feet **(high)** ▪ Volume of release – small percentage of septic systems assumed failing at any one time; low population density **(low)** ▪ Duration of release - little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport - travel primarily through soil or via groundwater **(medium)** Surface Water Watershed: ▪ Distance from surface water - beyond 500 feet **(low)** ▪ Volume of release – small percentage of septic systems assumed failing at any one time **(medium)** ▪ Duration of release - little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport - travel primarily through soil **(low)** Overall Release Potential = LOW	Recharge Area: ▪ Distance from spring - within 7 miles **(high)** ▪ Toxicity - acute, pathogens from leaching of septic waste **(high)** Surface Water Watershed: ▪ Distance from surface water - within 7 miles **(high)** ▪ Toxicity - acute, pathogens from leaching of septic waste **(high)** Overall Risk Potential = HIGH
Nonpoint Source: FOREST AREAS	Recharge Area: ▪ Low density of forestry activities **(low)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(low)** Surface Water Watershed: ▪ Low density of forestry activities **(low)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(low)** Overall Release Potential = **LOW**	Recharge Area: ▪ Forestry activities near streams **(medium)** ▪ Low toxicity **(low)** Surface Water Watershed: ▪ Forestry activities near streams **(medium)** ▪ Low toxicity **(low)** Overall Risk Potential = **LOW**

POTENTIAL POINT POLLUTANT SOURCES		
MILL CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Mining: Dalton City Quarry (Past Producer) Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – only release would be associated with stormwater – less than 1000 gallons **(low)** ▪ Duration of release – "past producer", therefore little likelihood of a release **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – mined for stone, therefore inert runoff with suspended solids **(low)** Overall Risk Potential = MEDIUM
RCRA Sites: American Sample Systems, Inc. 1809 Kimberly Park Dr. Dalton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – Small quantity generator – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chemicals and hazardous waste stored on site **(medium)** Overall Risk Potential = HIGH
RCRA Sites: Blue Ridge Mtn Contract Carriers (aka, Carpet Ctr Leasing) 835 Shugart Road Dalton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chemicals stored on site **(medium)** Overall Risk Potential = HIGH
RCRA Sites: Circle M Food Shop #10 2201 Chattanooga Road Dalton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – Small quantity generator – less than 1000 gallons **(low)** ▪ Duration of release – spill of gasoline recorded in March 1996 **(medium)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – gasoline stored on site **(high)** Overall Risk Potential = HIGH

POTENTIAL POINT POLLUTANT SOURCES		
MILL CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
RCRA Sites: Dalton College 213 N College Drive Dalton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – Small quantity generator – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chemicals and hazardous waste stored on site **(medium)** Overall Risk Potential = HIGH
RCRA Sites: Rick's Texaco 503 Holiday Avenue Dalton, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – based on Tier II data provided by EPD, greater than 10,000 gallons of chemicals stored on site **(high)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – large quantity of gasoline storage on site **(high)** Overall Risk Potential = HIGH
RCRA Sites: Roadtec 1900 Willowdale Rd. Dalton, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – miscellaneous chemicals stored on site **(medium)** Overall Risk Potential = HIGH
RCRA Sites: Tufting Machine Co. 308 Grimes St. Dalton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – Small quantity generator – less than 1000 gallons **(low)** ▪ Duration of release – no reported releases; zero discharge facility **(low)** ▪ Ease of travel/transport – generally flat topography, overland flow not likely **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chemicals and hazardous waste stored on site **(medium)** Overall Risk Potential = HIGH

POTENTIAL POINT POLLUTANT SOURCES		
MILL CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
RCRA Sites: US Xpress, Inc. 1535 New Hope Road Tunnel Hill, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – Small quantity generator – less than 1000 gallons **(low)** ▪ Duration of release – spill of ink recorded in May 1995 **(medium)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chemicals and ink **(medium)** Overall Risk Potential = HIGH
Hazardous Waste Facilities/ Landfills: Polychem, LTD (closed)2305 Dover Street Dalton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – Based on HSI, the site has a known release of tetracholoroethene into groundwater. No HSRA cleanup or investigation has been initiated **(high)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** ▪ Overall Release Potential = MEDIUM	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chemicals, including 1,1 Dichloroethene and tetrachoroethene, in groundwater; **(medium)** ▪ Overall Risk Potential = HIGH
Hazardous Waste Facilities/ Landfills: Rockyface-Westside Municipal Solid Waste Landfill 2598 Landfill Rd. Rockyface, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – between 1000 and 10,000 gallons **(medium)** ▪ Duration of release – Based on HSI, the site has a known release of tetracholoroethene into groundwater. Non-HSRA cleanup or investigation has been initiated **(high)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** ▪ Supplemental Guidance for Regulated Sources – Based on HSI, there is groundwater contamination, but unsure if this is the source **(medium)** Overall Release Potential = MEDIUM	▪ Distance from surface water intake – between 7 and 15 miles **(medium)** ▪ Toxicity – chemicals, including chloroform and tetrachoroethene, in groundwater; household hazardous waste not dumped in landfill **(medium)** ▪ Supplemental Guidance for Regulated Sources – Landfill handles mostly residential waste, with some commercial waste **(medium)** Overall Risk Potential = MEDIUM

POTENTIAL POINT POLLUTANT SOURCES		
MILL CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Lift Stations: Hollybrook Lift Station Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – less than 1000 gallons, due to secondary containment procedures such as automatic dialers in the case of a spill. **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – acute pathogens/fecal coliform **(high)** Overall Risk Potential = HIGH
Lift Stations: North Broadwick Dr. Lift Station Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – less than 1000 gallons, due to secondary containment procedures such as automatic dialers in the case of a spill. **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – hilly topography, overland flow very likely **(high)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – acute pathogens/fecal coliform **(high)** Overall Risk Potential = HIGH
Lift Stations: Windmere #1 Lift Station Whitfield County, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – less than 1000 gallons, due to secondary containment procedures such as automatic dialers in the case of a spill. **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – acute pathogens/fecal coliform **(high)** Overall Risk Potential = HIGH
Lift Stations: Windmere #2 Lift Station Whitfield County, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – less than 1000 gallons, due to secondary containment procedures such as automatic dialers in the case of a spill. **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – acute pathogens/fecal coliform **(high)** Overall Risk Potential = HIGH

POTENTIAL POINT POLLUTANT SOURCES		
MILL CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Lift Stations: Windmere #5 Lift Station Whitfield County, GA	▪ Distance from surface water – beyond 500 feet **(low)** ▪ Volume of release – less than 1000 gallons, due to secondary containment procedures such as automatic dialers in the case of a spill. **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – acute pathogens/fecal coliform **(high)** Overall Risk Potential = HIGH
Lift Stations: Woodsdale Lift Station Whitfield County, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – less than 1000 gallons, due to secondary containment procedures such as automatic dialers in the case of a spill. **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – acute pathogens/fecal coliform **(high)** Overall Risk Potential = HIGH
TRI: Chapco South 1702 Kimberly Park Drive Dalton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release - less than 250 gallons stored on site **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chemicals stored on site **(medium)** Overall Risk Potential = MEDIUM
TRI: Fibro Chem Inc. 1804 Kimberly Park Drive Dalton, GA	▪ Distance from surface water – within 500 feet **(high)** ▪ Volume of release – based on Tier II data provided by EPD, greater than 10,000 gallons of chemicals stored on site. However, site visits confirmed excellent secondary containment, justifying a low release potential **(low)** ▪ Duration of release – no reported releases **(low)** ▪ Ease of travel/transport – moderate topography, overland flow likely **(medium)** Overall Release Potential = LOW	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chemicals stored on site include caustics, irritants, flammables, and organic solvents **(high)** Overall Risk Potential = HIGH

POTENTIAL POINT POLLUTANT SOURCES		
MILL CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Secondary roads, paved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings high (135) within 7 miles of intake (**high**) ▪ Volume of release – estimated 1,000 – 10,000 gallons potential from tractor-trailer w/small receiving streams/tributaries **(medium)** ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = HIGH	▪ Distance from surface water intake – within 7 miles **(high)** ▪ Toxicity – chronic, chemicals from transport trucks (**medium)** Overall Risk Potential = MEDIUM
Primary Road Crossing Georgia Highway 201	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 3 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(medium)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM
Primary Road Crossing Interstate 75	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 15 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(high)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = HIGH

POTENTIAL POINT POLLUTANT SOURCES		
MILL CREEK – IMZ (7 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Primary Road Crossing US HWY 41	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 9 ▪ Volume of Release - On-going, permitted releases, chronic small events, likelihood of continuing releases **(medium)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(high)** ▪ Toxicity - Chronic, chemicals from transport trucks **(medium)** Overall Risk Potential = MEDIUM
Railroad Crossing CSX	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings – 13 **(high)** ▪ Volume of Release - High likelihood of one-time unanticipated release, catastrophic event **(high)** ▪ Duration of Release – no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = HIGH	▪ Average distance risk rating from surface water intake - **(high)** ▪ Toxicity - Chemicals from tanker cars **(medium)** Overall Risk Potential = MEDIUM
Natural Gas Line Crossing NATURAL GAS PIPELINES	▪ Distance from surface water - within 500 feet **(high)** ▪ Number of Road Crossings - 17 ▪ Volume of Release - Little likelihood of release, no reported releases **(low)** ▪ Duration of Release - Little likelihood of release, no reported releases **(low)** ▪ Ease of Travel/Transport - Hilly topography, many runoff conveyances, overland flow **(high)** Overall Release Potential = MEDIUM	▪ Average distance risk rating from surface water intake - **(high)** ▪ Toxicity - Chronic, chemicals, but rapid loss due to volatilization **(low)** Overall Risk Potential = MEDIUM

MILL CREEK –OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Secondary roads, paved	▪ Distance from surface water – within 500 feet **(high)** ▪ Density of secondary road crossings (4) within 7 –20 miles of intake (**low**) ▪ Volume of release – estimated 1,000 – 10,000 gallons potential from tractor-trailer w/small receiving streams/tributaries **(medium)** ▪ Little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport – road crossing streams, few structural or containment controls in place **(high)** Overall Release Potential = MEDIUM	▪ 2 road crossings within 7 – 15 miles upstream of intake; 2 road crossings 15-20 miles upstream of intake. **(medium)** ▪ Toxicity – chronic, chemicals from transport trucks (**medium)** Overall Risk Potential = MEDIUM

POTENTIAL NON-POINT POLLUTANT SOURCES		
MILL CREEK – IMZ (7 MILE RADIUS) and OMZ (20 MILE RADIUS)		
POTENTIAL SOURCE	**RELEASE POTENTIAL**	**RISK POTENTIAL**
Nonpoint Source: AGRICULTURAL AREAS	Using supplemental guidance for Non-point Sources: ▪ Low livestock density **(low)** ▪ Moderate topography **(medium)** ▪ Adequate buffers along creek **(low)** ▪ Moderate use of agricultural chemicals **(medium)** ▪ Adequate use of BMPs **(low)** Overall Release Potential = LOW	Using supplemental guidance for Non-point Sources: ▪ Agricultural areas located throughout watershed **(medium)** ▪ Moderate volume and medium risk of toxicity from agricultural chemicals, animals and wastes **(medium)** Overall Risk Potential = MEDIUM
Nonpoint Source: URBAN AREAS	Using supplemental guidance for Non-point Sources: ▪ Moderate percentage of impervious surface **(medium)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(low)** ▪ Urban area within 7 miles of the intake **(high)** Overall Release Potential = MEDIUM	Using supplemental guidance for Non-point Sources: ▪ Surface water in close proximity to urban area **(medium)** ▪ Moderate volume and toxicity of urban runoff **(medium)** Overall Risk Potential = MEDIUM
Nonpoint Source: NON-SEWER (SEPTIC) AREAS	▪ Distance from surface water - within 500 feet **(high)** ▪ Volume of release – small percentage of septic systems assumed failing at any one time **(medium)** ▪ Duration of release - little likelihood of release, no reported releases **(low)** ▪ Ease of travel/transport - travel primarily through soil or groundwater **(low)** Overall Release Potential = MEDIUM	▪ Distance from surface water - within 7 miles **(high)** ▪ Toxicity - acute, pathogens from leaching of septic waste **(high)** Overall Risk Potential = HIGH
Nonpoint Source: FOREST AREAS	▪ Low density of forestry activities **(low)** ▪ Moderate topography **(medium)** ▪ Adequate buffers **(low)** ▪ BMPs in place **(low)** Overall Release Potential = LOW	▪ Forestry activities near streams **(medium)** ▪ Low toxicity **(low)** Overall Risk Potential = LOW